

U.S. DEPARTMENT OF ENERGY
PUBLIC MEETING ON ENERGY CONSERVATION
STANDARDS FOR
REFRIGERATED BEVERAGE VENDING MACHINES

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Wednesday

June 17, 2009

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The Public Meeting convened in the
Department of Energy, Room 8E-089, 1000
Independence Avenue, S.W. Washington, D.C., at
9:00 a.m., Doug Brookman, facilitator,
presiding.

PARTICIPANTS:

DOUG BROOKMAN, Facilitator
BOB McGARRAH, USA Technologies
STEVEN COUSINS, Coca-Cola Company
MARC CHESSEROT, shecco
AMANDA STEVENS, Energy Solutions
EDWIN HORNQUIST, Southern California
Edison
ANDREW deLASKI, Appliance Standards
Awareness Project
GLEN SELFRIDGE, Royal Vendors
RAY McFADDEN, Royal Vendors
TRENT ROTH, Dixie-Narco/Crane
TROY DOOM, Dixie-Narco/Carne
JAMES MATHIS, Dixie-Narco/Crane
NINA TARLEY, Pepsi Co.
KRISTEN RAYMOND, Department of Justice
MARGO FAIER, Department of Justice
MICHAEL KIDO, Department of Energy
CHARLES LLENZA, Department of Energy
MICHAEL FRIEDRICHS, Department of Energy
FRANCINE PINTO, Department of Energy
SAM JASINSKI, Navigant Consulting
ARIS MARANTAN, Navigant Consulting
PARTICIPANTS (Continued):

MATTHEW MILLARD, Navigant Consulting
JEFFREY KINGMAN, Navigant Consulting
SRIRAM SOMASUNDARAM, Pacific Northwest
National Laboratory
MICHAEL SCOTT, Pacific Northwest
National Laboratory
GRAHAM PARKER, Pacific Northwest
National Laboratory
ERIC ANDERSEN, Pacific Northwest
National Laboratory
REBECCA DUFF, ICF International
MICHAEL REDMAN, American Beverage
Association
NED MONROE, National Automatic
Merchandising Association
LANE BURT, National Resources Defense
Council
AMANDA KORANE, American Council for an
Energy Efficient Economy

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1 P R O C E E D I N G S

2 (9:14 a.m.)

3 MR. BROOKMAN: Okay. Let's please
4 take your seat and let's get started.

5 Good morning, everybody, and
6 welcome. This is the U.S. Department of
7 Energy's public meeting on energy conservation
8 standards for refrigerated beverage vending
9 machines. Glad you could make it here.
10 Welcome to Washington.

11 And we're going to start off this
12 morning with welcoming remarks from Charles
13 Llenza.

14 MR. LLENZA: Welcome here to the
15 Department of Energy. On behalf of my boss,
16 Ron Lewis, and the rest of the team, I welcome
17 you here to the beverage vending public
18 meeting for the NOPR. And it's been a long
19 three years. So we hope that we get good
20 inputs from all the parties here on our work

21 MR. BROOKMAN: Thank you.

22 Are you okay? Yes?

1 PARTICIPANT: There's one more
2 person.

3 MR. BROOKMAN: Okay. Well, they
4 can join us midstream.

5 It's our tradition to give
6 everyone a chance to introduce him or herself.

7 Please say your name and organizational
8 affiliation. I'll start over here with Bob.

9 Not all of you will be on the
10 record for this. This is a matter of
11 courtesy.

12 Bob.

13 MR. MCGARRAH: Bob McGarrah, USA
14 Technologies.

15 MR. COUSINS: Steve Cousins, the
16 Coca-Cola Company.

17 MR. HORNQUIST: Edwin Hornquist,
18 Southern California Edison.

19 MS. STEVENS: Amanda Stevens,
20 consultant for Pacific Gas and Electric
21 Company.

22 MR. deLASKI: Andrew deLaski,

1 Appliance Standards Awareness Project.

2 MR. McFADDEN: Ray McFadden, Royal
3 Vendors.

4 MR. SELFRIDGE: Glen Selfridge,
5 Royal Vendors.

6 MR. ROTH: Trent Roth, Dixie-
7 Narco/Crane.

8 MS. TARLEY: Nina Tarley, Pepsi
9 Co.

10 MS. RAYMOND: Kristen Raymond,
11 Department of Justice.

12 MS. FAIER: Margo Faier,
13 Department of Justice.

14 MR. KIDO: Michael Kido,
15 Department of Energy.

16 MS. PINTO: Francine Pinto,
17 Department of Energy, General Counsel's Office
18 with Mike.

19 MR. LLENZA: I'm Charles Llenza,
20 Department of Energy.

21 MR. BROOKMAN: I didn't introduce
22 myself. Doug Brookman.

1 (Laughter.)

2 MR. BROOKMAN: Nice to see you.

3 Please.

4 MR. KINGMAN: Jeff Kingman,

5 Navigant Consulting.

6 MR. MARANTAN: Aris Marantan,

7 Navigant Consulting.

8 MR. JASINSKI: Sam Jasinski,

9 Navigant Consulting.

10 MR. MILLARD: Matt Millard,

11 Navigant Consulting.

12 MR. SOMASUNDARAM: Sriram

13 Somasundaram, Pacific Northwest National

14 Laboratory.

15 MR. SCOTT: Michael Scott, Pacific

16 Northwest National Laboratory.

17 MR. PARKER: Graham Parker,

18 Pacific Northwest National Lab.

19 MR. BROOKMAN: Start over here,

20 please.

21 MR. DOOM: Troy Doom, Dixie-

22 Narco/Crane.

1 MR. MATHIS: Jim Mathis, Dixie-
2 Narco/Crane.

3 MR. MONROE: Ned Monroe, the
4 National Automatic Merchandising Association.

5 MS. DUFF: Rebecca Duff, ICF
6 International and Support Energy Center.

7 MS. KORANE: Amanda Korane,
8 American Council for an Energy Efficient
9 Economy.

10 MR. ANDERSEN: Eric Andersen,
11 Pacific Northwest National Laboratory.

12 MR. ASHLEY: John Atchley, Elstat
13 Americas.

14 MR. REDMAN: Mike Redman, American
15 Beverage Association.

16 MR. BROOKMAN: Thanks. Thanks to
17 all of you.

18 Did we miss anybody?

19 (No response.)

20 MR. BROOKMAN: Okay. Just a quick
21 run-through on the agenda. I think all of you
22 have received a packet when you came in the

1 door. I think probably everybody handed off a
2 business card as you registered at the front
3 desk. The Department will make a copy of the
4 attendees for this meeting today.

5 You can see we're going to start
6 off, for those of you who are looking at this
7 agenda, we're going to start off with a
8 rulemaking overview. Immediately following
9 the overview there's an opportunity for each
10 of you to make brief summary comments about
11 the issues that matter to you today. So we
12 are going to provide that opportunity to you.

13 We'll take a break mid-morning
14 around about 10:30 or 10:45 or so. Following
15 that, we're going to have a description of the
16 engineering analysis, and then energy use
17 analysis and life cycle cost analysis.

18 Around about 12:15 or so we'll
19 break for lunch. Following the luncheon
20 break, we'll do national impact analysis,
21 trial standard levels, manufacturing impact
22 analysis, and then following that utility

1 impact analysis, employment impact analysis,
2 environmental assessment, regulatory impact
3 analysis.

4 We'll break mid-afternoon when we
5 need to take a break, whether that's 3:15 or
6 whenever that is, and then at the end of the
7 day there's yet another opportunity for those
8 of you that wish to do so to raise additional
9 issues, make summary comments.

10 We'll close out around about no
11 later than 4:15, 4:30ish with next steps and a
12 few closing remarks.

13 So that's the plan for today.
14 Questions, Comments about the agenda as
15 written?

16 And, in particular, anything that
17 you came here to discuss that doesn't fall in
18 the scope of the agenda as written?

19 (No response.)

20 MR. BROOKMAN: Okay. So this
21 looks good. Then to Charles.

22 MR. LLENZA: Welcome to the

1 Department of Energy's beverage vending
2 machine Notice of Proposed rulemaking public
3 meeting.

4 The main purpose of our meeting
5 today is to invite the stakeholders comment on
6 the proposed energy conservation standard
7 levels and request recommendations for
8 alternatives to our presented methodologies;
9 characterized results; in addition, to discuss
10 specific issues related to the analysis. We
11 seek your input on our work on the analysis
12 and methodologies assumptions, data and
13 results of the analysis.

14 We welcome comments from the
15 participants in written form and/or in today's
16 meeting, and please note that the NOPR comment
17 period ends July 28th, 2009.

18 Under the statutory authority of
19 EPACT, we are to issue a final rule no later
20 than August 8, 2009, the standard levels
21 becoming effective on or after August 8th,
22 2012.

1 We've also gone through the series
2 of steps in order to get to this meeting
3 today. So far the actions from the Department
4 on the beverage vending machine rule: we
5 issued test procedures in December 8, 2006;
6 the framework document was published in June
7 28, 2006; we had an advanced notice of
8 proposed rulemaking June 16, 2008; we have a
9 technical support document that's posted on
10 the DOE website of all our analysis and work
11 here at the Department; we published a notice
12 of proposed rulemaking on May 29th and then
13 today's meeting. Today's meeting would be the
14 final step before our final rule is issued on
15 August 8, 2009.

16 We all know the seven factors as
17 described in EPCA, and the selection of our
18 proposed standards, we have seven TSLs
19 selected for Class A; six TSLs selected for
20 Class B; and the way we have come up with
21 these, our different TSL levels, is that we go
22 from the most efficient to the less efficient

1 levels for each class.

2 At the end of the analysis is a
3 summary of the potential benefits that
4 outweigh the potential burdens, and that's
5 what we try to focus on for the recommended
6 TSL levels.

7 And on slide 7 we show what we
8 have proposed in terms of for equipment Class
9 B and Class A, and these are the energy
10 conservation equations that correspond to
11 each.

12 MR. BROOKMAN: So that is a
13 summary, an overview from Charles. Now
14 there's an opportunity for any of you that
15 wish to do so to make brief summary remarks
16 about your issues and your concerns.

17 Did anybody sign up to do this in
18 advance? Bob did. We'll start with Bob since
19 he did what he was supposed to do.

20 MR. MCGARRAH: That's what happens
21 when you retire and have a lot of time.

22 (Laughter.)

1 MR. BROOKMAN: And all of you, you
2 know, I didn't do the ground rules. So let me
3 just remind you very briefly. I think all of
4 you are familiar with this.

5 I'd ask that you please speak one
6 at a time. Please say your name for the
7 record. I'm going to be cuing people by name
8 as best I can to speak. I also wish to
9 encourage follow-on comments. So after I say
10 your name, you don't have need to say your
11 name and organizational affiliation every
12 time. It's sufficient just to say your name.

13 Please keep the focus here. Turn
14 off your cell phones or turn them on silent
15 mode, and if you need to have a sidebar
16 conversation with someone, these microphones
17 work rather well. We can hear you. So please
18 take that sidebar out of the room, and if
19 you'd share the air time, be concise today.
20 There's a lot to be said in a fairly short
21 amount of time. That would be helpful to
22 everyone.

1 So then, Bob, please.

2 MR. McGARRAH: Ladies and
3 gentlemen, thank you for the opportunity to
4 once again discuss the energy savings
5 opportunities in the improved design of
6 refrigerated beverage vending machines.

7 The report to date, the TSD, is
8 probably one of the most factual pieces of
9 information compiled about the vending machine
10 that I've ever seen in one document. Nice
11 job, guys.

12 In reviewing the report, I went
13 back to the root, the original of the task we
14 embarked on in 2005, and that root is the
15 Energy Policy and Conservation Act. Reviewing
16 this group's genesis, I'd like to read from
17 the report prepared on this project by the
18 Department of Energy, page 12, Item 5.

19 "The EPCA, Energy Policy and
20 Conservation Act, precludes Department of
21 Energy from adopting any standard that would
22 not result in significant" -- significant --

1 "conservation of energy."

2 I do not believe that we've
3 established that direction and we are taking
4 as a result a path that may probably not
5 result in any significant energy savings. I
6 would submit that the current proposal does
7 not result in significant conservation of
8 energy. Unless the installed base is included
9 in the standard, the energy efficiency
10 achieved will be minimal and have little
11 impact on energy presently consumed by
12 refrigerated beverage vendors.

13 Currently produced equipment meets
14 or exceeds the standards proposed for
15 implementation in three years. Purchases
16 since 2003 met ENERGY STAR Tier 2
17 requirements, and the regulations we're
18 proposing for implementation are no more
19 rigorous than the standards currently being
20 met voluntarily by the industry.

21 I don't see any savings greater
22 than what we are currently achieving, and I'll

1 explain a little bit about that in a minute.

2 Savings by the elimination of
3 equipment is not true savings, but only a
4 reduction in the energy usage by reduction of
5 the number of energy using products.

6 Further, the Energy Policy and
7 Conservation Act, as required by Sections --
8 and I'm not going to read -- well, I should
9 read some of them -- 325(o), 345(a), 342(c)
10 4(a), they say simply this. We have to
11 improve energy conservation, use less energy,
12 and we have to make it possible with greatest
13 new technology. I don't know that we're doing
14 that.

15 Technology is available. It's
16 tested. It's in use today that provides
17 greater energy savings than achieved by
18 current ENERGY STAR II machines. In fact,
19 technology can be retrofitted for less than
20 \$100 a machine, well within the scope and
21 criteria established in the report.

22 The report on refrigerated

1 beverage vending machines is complete,
2 exhaustive, and more than reasonably accurate.

3 Ownership of the five million-plus vending
4 machines or refrigerated beverage dispensing
5 machines is primarily in the hands of two
6 companies: Coca-Cola Company and Pepsi-Cola
7 Company.

8 Either through their own companies
9 or through subsidiaries, these two brands own
10 and operate 95 percent of cold beverage
11 vending machines in the United States. That's
12 on page 45 of the study. These two companies
13 purchase 90 percent or more of the total
14 beverage vending machines produced annually in
15 the United States. There's a table on page 47
16 and there's comments on page 60 to that
17 effect.

18 The energy used to operate these
19 machines is calculated on page 7 and 8 of the
20 report, along with the emissions associated
21 with this level of energy generation. The
22 tables on page 90 also show consumption levels

1 for various equipment types. This report
2 calculates the potential energy savings and
3 has comprehensive cost-benefit analysis and
4 projections into the future, page 10.

5 What it states specifically or by
6 interpretation are several indisputable facts.

7 First, vending machines consume a lot of
8 energy.

9 Second, machine purchases are
10 going down and machine energy consumption per
11 machine is rising due to the shift to a higher
12 energy consuming glass front-enders. That's
13 on page 67. I'm sorry. Page 76.

14 Third, projected machine life,
15 according to the Coca-Cola Company is
16 declining from 13 years to about ten years.
17 That's on page 57.

18 Fourth, the manufacture of new
19 machines has declined dramatically in the last
20 ten years to approximately 25 percent of a
21 high of 200,000 machines in the 1990s. So
22 less than 50,000 machines today, a huge

1 decline.

2 Fifth, machine placements. Total
3 machines on location is also declining with
4 Coca-Cola reporting picking up 200,000 or more
5 machines a year while purchasing substantially
6 less than 50,000 machines per year. Industry
7 production figures confirm this alarming drop
8 in new equipment purchases.

9 Machines on location will have a
10 projected drop to under one million by 2020.
11 That's less than 13 years. That's on page 79
12 of the statement.

13 Sixth, new technology advances are
14 five or more years away, will only generate 20
15 to 25 percent energy savings, and will cost
16 substantially more than the existing machines.

17 Word is reported on March 30th
18 that Pepsi Co. was testing energy efficient
19 machines in Washington, D.C. area and expects
20 to be "rolling them out worldwide over the
21 next several years." And I have a copy of
22 that if anybody wants to read it.

1 Seven, the current flow to
2 existing machines, approximately five million
3 Coke or Pepsi machines combined total, and the
4 current new equipment purchased per year,
5 under 100,000 units, it would take 50 years to
6 replace the existing float just on a swap-out
7 basis with no provision for any increase in
8 total number of machines or new business.

9 If Coke's negative replacement
10 number is real at minus 200,000 machines being
11 removed annually and not being replaced, the
12 vending business will all but disappear in 15
13 years, if the base of five million were taking
14 out 200,000 per year. And that's just the
15 Coca-Cola company.

16 Eight, both Coke and Pepsi are
17 shifting purchases in vending machines to
18 Visicoolers or glass front refrigerated boxes.

19 These machines are currently not regulated by
20 any industry or government energy standards.

21 Nine, the vending machine
22 manufacturers are undergoing significant

1 consolidation and the industry is in serious
2 trouble. I just learned this morning that one
3 of the companies is moving its entire
4 manufacturing operation and closing one of its
5 plants.

6 Ten and last, substantial funds
7 are becoming available for energy conservation
8 and reduction of energy consumption for
9 equipment such as vending machines and
10 Visicoolers. It is quite clear the simple
11 facts are that there will be little, if any,
12 substantial energy savings unless the industry
13 significantly increases production and
14 purchase of highly efficient machines.
15 Neither Coke nor Pepsi appear interested in
16 making a capital investment of that size.

17 And that size would be
18 approximately \$150 million for 100,000
19 machines.

20 The alterative is to substantially
21 reduce machine populations. It seems
22 population reduction is the course the

1 industry is set on. This will result in jobs
2 lost, revenue lost for the industry. Remember
3 every 500 machines represents one technician's
4 job. Every machine represents a minimum of
5 100 cases of product sold annually, minimum.

6 Route drivers deliver these cases.

7 Their jobs go away. The tax on the
8 employees' salaries, the tax on the product
9 sales, and all revenue and tax opportunities
10 in between disappear. All of the vending
11 manufacturing jobs disappear. It is happening
12 now. I think some of the folks will speak to
13 that.

14 The vending industry is being
15 legislated out of business. Bottle bills
16 requiring deposits on soft drink containers,
17 the restricting of beverage sales in schools,
18 ENERGY STAR implementation of energy
19 consumption standards have all hurt the
20 vending industry.

21 There are several alternatives.
22 There is a substantial and immediate

1 opportunity to reduce energy consumption by
2 refrigerated beverage machines. At once, no
3 need to wait for attrition, 10 or even
4 possibly 50 years based on current purchases
5 and size of existing base with the float.

6 MR. BROOKMAN: Bob, summarize the
7 rest of your comments.

8 MR. MCGARRAH: I can do it.

9 MR. BROOKMAN: Okay.

10 MR. MCGARRAH: Cut to the chase.

11 MR. BROOKMAN: And you can submit
12 that for the record if you wish, your entire

13 MR. MCGARRAH: I think I have.

14 PARTICIPANT: We have it in the
15 record.

16 MR. MCGARRAH: Over 50 utilities
17 nationwide are providing rebates for
18 purchasing technology. Foster Miller, one of
19 your sources for the report, and a government
20 contractor has tested the technology for
21 performance and reliability. The Department
22 of Energy endorses the technology. This is

1 not a case of finding the technology solution.

2 It's a case of properly applying centers to
3 adopt the existing technology.

4 The vending industry, its
5 manufacturers, equipment users are more than
6 capable of implementing the technology almost
7 immediately. Utilities are interested in
8 installing the technology and paying for it,
9 and the customer will benefit instantaneously
10 with substantial savings in their energy
11 bills.

12 Unique ownership of 90 percent of
13 machines among two entities makes for
14 unprecedented chance to encounter significant
15 savings in a relatively short time. This is
16 an opportunity to do what the government does
17 best, put interested parties together and make
18 it happen with a modest initial incentive.
19 The opportunity is large, but we can only act
20 on it and convert the existing base to a more
21 efficient operation.

22 We should target stimulus dollars.

1 I'll save three pages of stimulus dollars.

2 These machines, the millions of
3 machines that are going to disappear take
4 thousands of jobs with them in manufacturing,
5 service, repair and failing.

6 Tax revenues, et cetera, I talked
7 about that.

8 The best and quickest path to
9 achieving substantial energy savings and
10 assure that the best available technology is
11 implemented is to address the 800 pound
12 gorilla, the installed base.

13 Thank you.

14 MR. BROOKMAN: Thank you, Bob.

15 Other summary remarks here at the
16 outside? Please.

17 MR. SELFRIDGE: Yeah, I would
18 postpone it to later, but I'll be brief.

19 MR. BROOKMAN: Yes.

20 MR. SELFRIDGE: I think it's
21 appropriate now.

22 MR. BROOKMAN: Glen, please say

1 your name for the record.

2 MR. SELFRIDGE: Glen Selfridge.

3 MR. BROOKMAN: Thank you.

4 MR. SELFRIDGE: Royal Vendors,
5 Incorporated.

6 When I first received my copy of
7 the proposed rule, I looked at the formula for
8 the Type A and Type B machines, and my
9 immediate reaction was that there's whole a
10 whole typographical error. It seemed to be
11 inverted.

12 The Type A machine by its very
13 nature, cooling more volume than Type B
14 typically and utilizing a glass transparent
15 door, is inherently less energy using machine
16 than a Type A machine. So it was some
17 surprise that we see a projection that is
18 fully 20 percent more restrictive than that
19 for the Type B.

20 A little mental exercise here
21 might make this more clear than some I've used
22 with the other hundreds. I think we believe

1 CSX, the railroad company, the mileage, per
2 ton mile for freight rail is 423. Okay? A
3 freight rail is motorized, engine driven,
4 ground transportation. Okay? Why shouldn't
5 the mileage rating for a ton and a half sedan
6 be on the order of 20 percent better than
7 that? Okay? Over 500 miles per gallon.

8 It's just a thought experiment.
9 Okay?

10 Coming out of this meeting, we
11 would like to understand how these formulas
12 are determine given, okay, that reason and
13 given that there might be methods to get to a
14 Class A tank. Why do we use and if we use
15 them, are there restrictions to trade in terms
16 of anything out there that would prevent us
17 doing something that might be allowed under
18 the test?

19 And that's what I want to get out
20 of this meeting. It will be in my public
21 record.

22 MR. BROOKMAN: Okay, okay. Do you

1 wish to comment, Charles? Charles Llenza.

2 MR. LLENZA: Charles Llenza,
3 Department of Energy.

4 I think the best thing to do would
5 be to go through our presentation today, and
6 as we get to the different steps, there will
7 be a section that we discuss our results and
8 the analysis of how we got to those results,
9 and that would be a good opportunity at that
10 point to get into more detail.

11 MR. BROOKMAN: And, of course, the
12 Department would welcome your questions and
13 specific follow-on to make sure you understand
14 that methodology.

15 Trent.

16 MR. ROTH: Trent Roth from Dixie
17 Narco.

18 I would contradict that a little
19 bit. We'll talk about that at the appropriate
20 time, but we feel that the standards actually,
21 when we started doing the math worked out to
22 be correct in the case where we looked at

1 stack units. In fact, the change from cubic
2 capacity, from can capacity to cubic capacity,
3 when we look at a stack unit compared to a
4 glass front, actually when we do the
5 mathematical equations, we'd come out to the
6 exact threshold on a comparable unit.

7 So we'll be able to explain why we
8 think it is correct, and why we would disagree
9 with that.

10 MR. BROOKMAN: I see. So Class A
11 and B work for you as described.

12 MR. ROTH: It appears that it kind
13 of did what I thought was the original piece
14 of trying to set up to one that has similar
15 parameters. Yes, it does work for us. We'll
16 talk about it at the appropriate time.

17 MR. BROOKMAN: Great. Okay.
18 We'll have significant, detailed presentation
19 on these matters.

20 Other summary remarks here at the
21 outset? Andrew, Andrew deLaski.

22 MR. deLASKI: A couple of remarks.

1 Is this on? Do you push the button there?

2 MR. BROOKMAN: No, it's on.

3 MR. deLASKI: In general, we want
4 to support the proposal. We think it's a
5 solid proposal by the Department for new
6 standards for vending machines.

7 For Class A machines, the
8 Department had proposed standards that are the
9 maximum level that's cost effective, and I
10 think that's a good policy. It's a policy
11 that we have long advocated for and rulemaking
12 that the Department should focus as the
13 statute requires on setting the standard which
14 maximizes energy efficiency, energy savings,
15 and is cost effective.

16 Sometimes in the past the
17 Department has gravitated towards setting
18 standards which maximize economic benefits
19 focused on consumers, rather than maximizing
20 cost effective energy savings, and the
21 distinction in those two points is important,
22 and over the 25 or so rulemakings that will be

1 completed in the next two years has the
2 potential if this stands as policy to be a
3 significant departure for the Department and
4 one that will result in very large energy
5 savings not just in this rulemaking, but over
6 the many rulemakings that are underway right
7 now.

8 With respect to Class B machines,
9 TSL-3 and TSL-4 seem to have very similar
10 results, economic results. The Department had
11 proposed TSL-3. The difference in energy
12 savings also is pretty small.

13 That said, we would tend to
14 suggest that if the economic impacts are about
15 the same, given uncertainty in the analysis, I
16 think we'd have to say that they are about the
17 same; that the Department should set the
18 stronger standard and that TSL-4 should be
19 given additional consideration for the Class B
20 machines, given the uncertainty in the
21 analysis and the likelihood that the economic
22 impacts are really about the same.

1 A key question that we have that
2 hopefully will be dealt with later today I
3 think relates to point that the two
4 manufacturers commented on earlier. My
5 understanding is that the Class A machines,
6 much of the savings come from the application
7 of LED lighting in that equipment, and that
8 the standard proposed for Class B machines
9 does not include, does not imply, is not based
10 on design options that assume LED lighting.
11 Therefore, the large difference in energy and
12 relative improvement, one set of machines
13 looking at a 30 or 40 percent more improvement
14 relative to the best case, the other about 14
15 percent.

16 It doesn't work, the current
17 market situation where glass front machines
18 now would become the more efficient option in
19 the marketplace.

20 We're interested in exploring why
21 TSL-5 for the Class B machines and
22 understanding better why the cost

1 effectiveness falls off a cliff. That is that
2 DOE has assumed dramatically larger increases
3 in lighting costs for TSL-5 machines relative
4 to -- for the solid front machines relative to
5 the glass front machines and much smaller
6 savings.

7 And the result is that we have
8 standards that would necessarily be applying
9 to one type of machine but not the other.
10 Understanding that is something I hope I can
11 come out of today, why the difference.

12 I want to highlight, and just to
13 comment briefly on the issue of significant
14 savings. The issue of significant savings was
15 resolved in the 1980s in NRDC v. Harrington.
16 This standard clearly addresses as proposed
17 clearly a threshold of significant savings.
18 It's not the biggest energy conservation
19 standard the Department will ever do, but when
20 you add up all the pebbles you get some rocks,
21 and that's important to keep in mind as we
22 address each of these energy conservation

1 standards.

2 Four quick comments that are
3 cross-cutting that I hope will come up today.
4 If not, I hope we can address them at the end
5 or at some point during the day. One is
6 multi-part standards. DOE has decided that it
7 does not have the authority to set standards
8 for more than one component. We argued early
9 in this rulemaking that DOE should consider
10 control strategies in addition to setting up
11 performance standards. The Department says we
12 don't have the authority.

13 We think issue, what's come up in
14 rulemaking after rulemaking, we think it's
15 right to be revisited under this new
16 administration. The Clinton administration
17 determined it did have authority for multi-
18 part standards. The Bush folks under
19 President Bush, there was a determination that
20 that authority wasn't there. It's time to
21 revisit again does DOE have the authority to
22 set multi-part standards that would enable

1 things that require smart controls in vending
2 machines.

3 I understand it's too late in this
4 rulemaking. August 8th is right around the
5 corner. It's not going to be considered in
6 this rulemaking, but I think the policy needs
7 to be revisited.

8 Test method, DOE screened out
9 energy saving technologies early in this
10 rulemaking on determining that variable speed
11 technology would not be -- the methods would
12 not be captured by the test method, and this
13 is a real shame. Significant energy savings
14 are not considered in the rulemaking because
15 of this problem in the test method because it
16 doesn't grasp those technologies.

17 This brings into light or
18 highlights the need for the Department to get
19 moving on revising and updating test methods
20 for this technology, but also for other
21 technologies where control strategies aren't
22 being reflected in the test method. Real

1 savings are being left on the table.

2 Carbon valuation, DOE has
3 indicated it's reevaluating its approach on
4 carbon valuation. We think this is important.

5 We welcome the Department's reevaluation of
6 this issue.

7 I would note that it's about time
8 and something should be done with all due
9 speed. Looking at the maximum level of carbon
10 valuation in this rulemaking, it's about one-
11 third of the maximum NPV calculation, consumer
12 NPV calculation. It's also five to six times
13 the estimate of manufacturer impacts, and this
14 is an estimate that we think is still lower
15 than it should be based on the literature.

16 The final issue is one that's been
17 nagging at me for several years now at the
18 Department where we consider -- which is the
19 discount of the physical values. The
20 Department continues to apply financial
21 discount rates to physical values like quads
22 of energy, and it in my view is an

1 inappropriate application of financial tools,
2 financial evaluation tools to discount the
3 value of energy savings and pollution
4 reductions over time.

5 It was an approach that was
6 applied starting a couple of years ago, and I
7 think it should be discontinued.

8 MR. BROOKMAN: Thank you, Andy.

9 So other summary remarks here at
10 the outset before we get into the more
11 detailed presentation?

12 (No response.)

13 MR. BROOKMAN: Okay. So before we
14 then launch into the actual presentations --
15 go ahead, Aris -- there are a few people that
16 joined us and missed the introductions at the
17 outset. Could you state your name and
18 organizational affiliation?

19 MR. BURT: Lane Burt, Natural
20 Resources Defense Council.

21 MR. BROOKMAN: Thank you, Lane.

22 And would you introduce yourself,

1 please?

2 MR. CHASSEROT: Yes, Marc

3 Chasserot, Managing Director, shecco.

4 MR. BROOKMAN: Thank you.

5 Anybody else that we missed?

6 PARTICIPANT: (Speaking from an
7 unmiked location.)

8 MR. BROOKMAN: Good, thank you.

9 Glad you could join us.

10 Oh, yes.

11 MR. FRIEDRICHS: Mark Friedrichs.

12 I'm with the Policy Office at DOE.

13 MR. BROOKMAN: Thank you, Mark.

14 Okay. So all of you, I believe,
15 have a copy of the slides that are going to be
16 projected up on the screen, and so let's turn
17 it over to Aris.

18 MR. MARANTAN: Thank you, Doug.

19 Aris Marantan.

20 While DOE requests comments and
21 feedback on the proposed standards in this
22 Notice of Proposed Rulemaking, DOE also

1 requests feedback and input from any
2 stakeholders on the methodology and the
3 assumptions that's in the data that's used in
4 the analysis itself.

5 So everything that's contained in
6 the Notice of Proposed Rulemaking in the
7 Federal Register is subject to that request
8 for comment.

9 However, DOE specifically requests
10 comment on a couple of specific issues, and
11 these are listed on the next two slides.
12 Slide 9 starts with industry NPV. DOE is
13 requesting specific comments on the estimated
14 decline in industry net present value at TSL-6
15 and what impacts this could have on industry
16 parties, including small businesses.

17 This is summarized in Tables 512
18 through 515 in Section V(b)(2) of the notice.

19 The second one is the standards
20 equations. DOE developed a method to develop
21 a standard equation based on the analysis.

22 This is contained in Table B-3 of Section V(a)

1 of the notice.

2 The third one is industry impacts
3 as a whole. This is Section V(b)(2) in the
4 notice.

5 And before we get to the next
6 slide, we will be coming back to these
7 specifically later on in the day when we get
8 to that portion of the presentation. So we'll
9 come back and address these in turn.

10 Slide 10 has the first three
11 bullets that deal with small businesses in
12 particular. This is the impact on small
13 businesses, how small businesses will be
14 affected due to the new standards; compliance
15 costs for the small businesses; and any
16 alternatives DOE should consider in
17 establishing this standard.

18 These are contained in Section
19 VI(b) of the notice, and the last one is the
20 standard levels selected themselves, whether
21 the energy savings and related benefits of
22 TSL-6 outweigh the costs. That's specifically

1 for Class A, and that's contained in Section
2 V(c) of the notice.

3 So, again, we'll come back to all
4 of these specifically during the day.

5 Okay. The next section of the
6 presentation deals with the rulemaking
7 analyses. You can see here that the top set
8 of chevrons describe our rulemaking process.
9 We start off with the framework document, and
10 I believe we had our public meeting for that
11 framework document about two years ago.

12 The ANOPR, or the Advanced Notice
13 of Proposed Rulemaking, laid out the
14 analytical tools that DOE would be using in
15 the rulemaking. We held a public meeting for
16 the ANOPR about a year and a day ago. It was
17 June 16th, as Graham pointed out to me
18 earlier, last year, and today we're at the
19 NOPR stage. This is the Notice of Proposed
20 Rulemaking where DOE is actually proposing a
21 standard.

22 And we'll start off with a summary

1 of the analyses that are part of the NOPR.
2 The first part is the revision of the ANOPR
3 analyses, and we will go through the rest of
4 them later today.

5 But as part of the first step, the
6 revision of the ANOPR analyses, we conduct an
7 engineering analysis, a life cycle cost and
8 payback period analysis and a national impact
9 analysis. So to present the engineering is
10 Sam Jasinski next.

11 MR. JASINSKI: Thank you, Aris.

12 As he said, my name is Sam
13 Jasinski from Navigant Consulting, and I'm
14 here to discuss the engineering analysis that
15 the Department of Energy did for beverage
16 vending machines.

17 First, the main purpose of the
18 engineering analysis is to characterize the
19 cost to manufacturers of producing higher
20 efficiency equipment, and this is typically in
21 the form of cost efficiency curves for each
22 equipment class.

1 Another goal of the engineering
2 analysis is to evaluate design options. These
3 are technologies that have the potential to
4 when they're implemented in the vending
5 machines to increase and improve their energy
6 efficiency.

7 Lastly, when necessary, the
8 Department conducts as part of the engineering
9 analysis sensitivity analyses, particular for
10 vending machines. There was a sensitivity
11 analysis done on material prices because
12 variation in material prices could have
13 impacts on the rulemaking.

14 Leading up to the engineering
15 analysis and also encompassing the engineering
16 analysis is a market and technology
17 assessment. As part of the market and
18 technology assessment, the goal of the market
19 assessment is to develop a qualitative and
20 quantitative characterization of the BVM
21 industry. The main goal of the technology
22 assessment is to develop a preliminary list of

1 technologies that could increase the
2 efficiency of vending machines.

3 The details of this market and
4 technology assessment, how it was conducted,
5 and the findings can be found in Chapter 3 of
6 the TSD, but one of the major outcomes of the
7 market and technology assessment is the
8 Department deciding on equipment classes, and
9 this is just how the Department deems it
10 necessary to classify the beverage vending
11 machine equipment available.

12 The DOE decided that the
13 classification would be into two separate
14 equipment classes, Class A and Class B. Class
15 A equipment, in the decision to classify in
16 these rulemakings, it's usually determined by
17 physical characteristics that affect energy
18 consumption. In this case it was based
19 largely on refrigeration method, certain
20 design features, and vending mechanisms.

21 So for Class A equipment, these
22 are fully cooled vending machines, and they

1 typically use a shelf style storage and
2 vending system, and they also typically have a
3 glass transparent front.

4 Class B machines are treated as
5 anything that can't be classified as a Class A
6 machine in our analyses, and these machines
7 are typically solid or closed front machines
8 that use a stacked storage system or vending
9 method, and they are zone cooled machines.

10 As I mentioned earlier in the
11 technology assessment, a preliminary list of
12 energy saving technologies is developed, and
13 then after the market and technology
14 assessment, there's a subsequent analysis
15 that's part of the engineering analysis, and
16 there's a screening analysis in which the DOE
17 uses certain criteria to screen out
18 technologies that are either not
19 technologically feasible, not practical to
20 manufacture, install or service, have adverse
21 effects on utility to the consumer, or have
22 adverse effects on healthy and safety.

1 And after the screening analysis,
2 certain technologies are eliminated, and what
3 we have left are the design options, and the
4 Department of Energy used a design option
5 approach for this particular engineering
6 analysis in which we gathered data on the cost
7 efficiency of these design options for
8 manufacturers or components and flyers and
9 used a computer simulation to determine their
10 effect on the efficiency of the vending
11 machine equipment, and by using the design
12 option approach, the outcomes were six cost
13 efficiency curves, one for each of three
14 representative sizes. A size here, the metric
15 uses refrigerator volume or cubic volume as
16 mentioned earlier for each equipment class.

17 So the results of the engineering
18 analysis can be found in Chapter 5, but it's
19 important to realize that the results of the
20 engineering analysis are used as inputs for
21 downstream analyses, such as the LCC, which is
22 the life cycle cost analysis later on.

1 To wrap up, I'd just like to go
2 over a few of the major changes that have been
3 made since the ANOPR, since it has been a
4 while. Mainly throughout the rulemaking
5 process the Department of Energy continues to
6 look for information with regard to the market
7 and technology assessment, and since the ANOPR
8 the Department has found information that
9 influenced us to increase the external
10 dimensions for both Class A and Class B
11 equipment, and those increases have subsequent
12 effects on things such as wall area, the size
13 of the glass front. The details of that can
14 be found in Chapter 5 of the TSD.

15 The second major change has been
16 to LED energy consumption and pricing, as well
17 as configurations for Class B. Configuration
18 for Class A remain the same, and this is due
19 mainly to the fact that LEDs are a rapidly
20 developing technology. So new information is
21 constantly becoming available, and details of
22 those changes and explanations of those

1 changes can also be found in Chapter 5 of the
2 TSD.

3 So here's back to the snapshot of
4 the big picture, and I think the next analysis
5 that we're going to discuss is the energy use
6 and characterization.

7 MR. BROOKMAN: In a moment. Let's
8 just pause for a moment. Any questions on the
9 engineering analysis, in particular, what Sam
10 just said about the changes that were made
11 based on the ongoing analysis?

12 Yes, please, Amanda.

13 MS. STEVENS: Amanda Stevens. I'm
14 with PG&E.

15 So I had a question. I know that
16 LED prices were updated based on the
17 commercial refrigeration equipment rulemaking.

18 So for the Class B equipment, I see the price
19 for a fixture goes from about \$50 in 2007 to
20 \$135 in 2008. Could you talk a little bit
21 about why that pricing is --.

22 MR. JASINSKI: Sure. Class B,

1 LEDs for Class B equipment, like you said,
2 were based on commercial refrigeration
3 equipment. Since the ANOPR of the beverage
4 vending machine rulemaking, a final rule has
5 been published for commercial refrigeration
6 equipment. So information between now and
7 then for vending machines has been updated to
8 reflect that because it's originally based on
9 commercial refrigeration equipment.

10 Specifically for Class B, we found
11 based on manufacturing and stakeholder comment
12 that we were underestimating the number of
13 LEDs in closed front specifically that were
14 necessary to maintain a certain standard of
15 utility in terms of back lighting signage.

16 So the cost increase is reflective
17 of we are now putting more LED fixtures in to
18 replace the fluorescent system as had been
19 before.

20 MS. STEVENS: Right.

21 MR. JASINSKI: So originally it
22 was a one-to-one ratio. If there was a

1 fluorescent fixture, we replaced it with one
2 LED fixture. Now that number is around one
3 and a half. So for every fluorescent fixture
4 in order to implement an LED fixture, we
5 implement one and a half times the LED
6 fixtures.

7 MS. STEVENS: I guess my question
8 was more the per fixture cost. I realize
9 there's a 1.5 differential, but per fixture.

10 MR. JASINSKI: If you're pulling
11 those numbers from that table, the one and a
12 half is implemented before that table. So
13 that is actually one and a half fixtures.

14 MS. STEVENS: Okay. I can follow
15 that maybe off-line.

16 MR. JASINSKI: Yeah, we can
17 discuss it later and I can show you the
18 spreadsheets.

19 MS. STEVENS: Sure.

20 MR. BROOKMAN: Yes, please, Nina.

21 MS. TARLEY: Nina Tarley, Pepsi
22 Co.

1 I would just like to state for the
2 record that the use of LED lights in glass
3 front vendors is covered by intellectual
4 property. Coca-Cola owns the patent. So
5 we're precluded from using it.

6 MR. BROOKMAN: Thank you.

7 Okay. Other questions about this,
8 the content in engineering analysis,
9 particularly about the changes from the ANOPR
10 now to the NOPR?

11 (No response.)

12 MR. BROOKMAN: Okay.

13 MR. JASINSKI: Thank you.

14 MR. BROOKMAN: Thank you.

15 (Pause in proceedings.)

16 MR. SOMASUNDARAM: Sorry about the
17 confusion. Sriram Somasundaram, Pacific
18 Northwest National Laboratory.

19 I will talk about the first bullet
20 and then hand over to Mike Scott.

21 The energy use characterization
22 step of the analysis, this again was done as

1 part of the ANOPR, and then revised, updated,
2 subject to the engineering analysis changes to
3 the configuration of the two types of beverage
4 vending machines, Class A and Class B, that
5 Sam just described.

6 So we re-developed the energy
7 consumption numbers for each of the two
8 classes of beverage vending machines, and then
9 we fed that energy consumption figures for
10 both types of machines installed indoors and
11 outdoors to the life cycle cost analysis, and
12 before we get to the life cycle cost analysis,
13 we have to re-develop the mark-ups for the
14 price of the equipment.

15 Mike, do you want to describe that
16 or do you want me to continue?

17 MR. SCOTT: Why don't you go
18 through all of the purpose slides and then
19 I'll come up and do the details.

20 MR. SOMASUNDARAM: Okay. As part
21 of the ANOPR analysis, we had assumed three
22 distribution channels for the beverage vending

1 machines. The percentages of shipments
2 through each of the channels were 68 percent,
3 27 percent, and five percent.

4 We heard comments from both
5 manufacturers and users of equipment during
6 the ANOPR public meeting that those
7 percentages need to be updated to 85 percent
8 through Channel 1, which is the manufacturer
9 direct to bottlers; and ten percent through
10 Channel 2; and five percent through Channel 3.

11 So once we incorporated those
12 percentages through the distribution channels,
13 we came up with new figures for the markups,
14 and the percentage numbers that I just
15 described are described on Slide No. 15.

16 So like I said, these numbers were
17 modified from the ANOPR based on comments at
18 the meeting. So putting in these new
19 percentages of shipments through the three
20 channels, we came up with the overall, sort of
21 the second bullet there, outputs. So the
22 overall weighted average baseline markup for

1 baseline equipment turned out to be 1.144 for
2 the ANOPR analysis. That compares with 1.226
3 in the ANOPR.

4 And the simple explanation of this
5 change is in the fact that the manufacturer
6 direct, if you remember, the manufacturer
7 direct to beverage bottler distributor number
8 went up from 68 to 85, who don't have markups
9 or have a markup of 1.00. So the overall
10 weighted average went down to 1.144.

11 Now, the overage weighted average
12 incremental markups for higher efficiency
13 equipment also went down to 1.102 compared to
14 1.137 in the ANOPR analysis, and both of these
15 markups include sales tax.

16 I believe I will hand it over to
17 Mike Scott now.

18 MR. BROOKMAN: Let's pause there
19 and see if there questions about these changes
20 based on from the ANOPR to the NOPR analyses
21 and the distribution channels. Any comments,
22 questions on these?

1 (No response.)

2 MR. SCOTT: Okay. So from there
3 we proceed to the life cycle cost and payback
4 period analysis, and the purpose of that, of
5 course, is to develop the estimates of the
6 consumer or customer life cycle cost and the
7 notion of how long it takes to pay back an
8 initial investment in more efficient
9 equipment.

10 The life cycle cost equals the
11 customer price plus the sum of annual
12 operating cost discounted to the base year of
13 the analysis, which in this case is 2012. We
14 do the economic evaluation loosely speaking
15 from a customer perspective. We look at the
16 cost to the customer of purchasing the
17 equipment, but the savings are included in the
18 life cycle cost analysis regardless of to whom
19 they may actually go, and that's by reason of
20 EPCA. We take a look at the operational
21 savings, whether or not the actual owner of
22 the machine gets those savings.

1 The analysis was implemented as
2 described back in the ANOPR meeting about a
3 year ago in an Excel spreadsheet with add-on
4 macros to estimate impacts in what we chose to
5 be individual states as a way to look at
6 variation in things like electricity prices,
7 sales taxes, installation costs and so on, to
8 obtain not only a point estimate of the
9 average for the country, but also to see how
10 that life cycle cost varied with location.

11 The description of the analysis
12 can be found in the NOPR itself abbreviated in
13 Section IV, but in addition to that, it is
14 more detailed in Chapter 8 of the TSD, of the
15 technical support document, and the results
16 can be found in Appendix F.

17 The results are expressed
18 generally as life cycle cost savings, that is,
19 the savings against the baseline equipment,
20 and also a payback period is calculated for
21 individuals who like to look at payback
22 periods.

1 Okay. Electricity prices. There
2 has been a fair amount of change since the
3 ANOPR, and the principal change is that last
4 bullet on this slide. I'm not going to read
5 through the whole slide. You have it there in
6 front of you. Generally we followed the same
7 procedures as we were a year ago with the
8 difference that electricity price trends have
9 changed between the AEO 2008 reference case
10 and the AEO 2009 reference case.

11 And we're required to follow that
12 AEO reference case as a central case. That's
13 what the Department does for the default
14 scenario, and then we extrapolate the trend in
15 values from 2020 through 2030 as a forecast to
16 establish prices for the rest of the 30-year
17 forecast period.

18 We use a 30-year forecast period,
19 and there was a comment about that at the
20 ANOPR stage, to maintain a consistent frame of
21 reference for the full life cycle of products
22 of various lengths because the Department

1 wants to keep some comparability across
2 rulemaking so that they can look at equipment
3 with different lifetimes and see what the
4 energy savings actually are.

5 And there's a fairly detailed
6 write-up in the NOPR about the history of that
7 30-year rulemaking or 30-year time period.

8 Other inputs to the life cycle
9 cost analysis. Installation costs were
10 updated and then held constant with higher
11 efficiency levels based on industry comments.

12 The installation costs are shown in NOPR and
13 documented in the TSD.

14 Discount rates were updated
15 somewhat. We obtain our discount rates from a
16 weighted average cost of capital calculations
17 that we do with data on individual companies
18 from a Website called Damodaran Online. It's
19 from New York University, and the data were
20 updated initially for 2008 at the ANOPR stage
21 and then updated again to 2009 in early this
22 year.

1 The equipment lifetime, there was
2 some comment about that at the ANOPR stage.
3 We had originally, I believe, put in a service
4 life of 14 years average. We were told at the
5 ANOPR stage, no, the average service life is
6 more like ten years with maybe 15 years as
7 kind of a maximum for that, for BVMs. So we
8 made that correction.

9 Repair cost, there was some
10 discussion of repair cost which got also mixed
11 in with maintenance cost at the ANOPR stage.
12 We believe we've sorted all of that out
13 correctly in the NOPR. We have a baseline
14 repair cost that does increase due to higher
15 cost components at more efficient levels.

16 We got some comment that I believe
17 it was our base maintenance cost was too high
18 originally. We corrected that and then did
19 some other corrections, all of which is
20 reported in the NOPR. So there were changes
21 to all of those things.

22 Our results still look about the

1 same as they did before, although if you look
2 back at the ANOPR, the numbers are
3 considerably different due to all of the
4 changes that were made.

5 Generally there's a fairly flat
6 life cycle cost curve as you go to higher and
7 higher installation cost, meaning that the
8 operations costs are basically offsetting the
9 higher cost of investment at each level until
10 you get to Level 7, and then you go up to
11 Level 8 and we can discuss why that is. We'll
12 need some help from Navigant on that, but that
13 Max Tech is truly Max Tech. It's a very
14 efficient machine, but it's also a very
15 expensive one, and so the life cycle costs
16 tend to rise.

17 This is only for one case on the
18 screen here. This is for basically average
19 U.S. conditions for a bottler owned machine in
20 a manufacturing facility. We looked at a
21 whole range of situations, different
22 locations, different ownership and so on. The

1 detail of all of that can be found in Appendix
2 F of the technical support document if you're
3 looking for it.

4 We did a similar thing on payback,
5 and there, again, you get a pretty flat
6 payback period. All of the payback periods
7 are less than five years, again, until you get
8 to that Level 8 Max Tech.

9 And that's an extra slide, and
10 that's it for LCC right now. I think I
11 probably should stop there and wait for
12 comments.

13 MR. BROOKMAN: Yes. So questions
14 or comments on this series of slides, inputs
15 and these LCC graphics? Andrew.

16 MR. deLASKI: I'm not sure where
17 this comes in, where this will get discussed,
18 and maybe this is the right time, maybe not.
19 So let me know.

20 In my opening remarks I brought up
21 this issue or this concern about for the Class
22 B machines, the cost really falls off a cliff,

1 the TSL-4 and TSL-5. TSL-4 is cost effective,
2 sort of that chart you showed for Class B with
3 the elbow-like.

4 MR. SCOTT: Much earlier, yeah.

5 MR. deLASKI: Can you describe
6 what's going on? What is the factor that's
7 driving that up?

8 MR. SCOTT: I'd prefer to let
9 Navigant handle that one for sure. They're
10 the technological guys on this one.

11 MR. JASINSKI: Sam Jasinski.

12 MR. BROOKMAN: Yes, Sam. Go
13 ahead.

14 MR. JASINSKI: Yeah, that again
15 has to do with the LED pricing increase,
16 again, because of those changes that I
17 mentioned earlier about having to use more LED
18 fixtures in Class B as opposed to the ANOPR.
19 The cost effectiveness of that design option,
20 LED lighting design option increases and
21 that's where you see that big jump at TSL-5
22 for Class B machines.

1 MR. deLASKI: So looking at
2 Appendix B in the TSD, it looks like you
3 assumed a \$110 increase for LEDs in a glass
4 front machine and a \$420 increase in solid
5 front is the way I just calculated here.

6 That strikes me as a huge
7 differential, more than one and a half times.

8 Is it that much more light that is needed?

9 MR. JASINSKI: Based on some of
10 the comments that we've received from
11 manufacturers and stakeholders, the difference
12 in the light, the amount of light that is
13 sufficient for each machine is that drastic.

14 MR. BROOKMAN: Yes, please.
15 Trent.

16 MR. ROTH: Trent from Dixie-Narco.

17 We have four lights, as many as
18 four in the closed front machine or our Class
19 B machine and light up the signage. There's
20 no space between the door and the inner door
21 liner, which you have space to do. So you
22 don't get a lot of spreading of the light. So

1 we do use significantly more light bulbs in a
2 closed front machine than we do in a glass
3 front machine.

4 So that's where they're getting
5 that, being able to shine a light through and
6 drive the branding awareness that you have
7 through a plastic panel that you sign the
8 light through takes more light. So that's why
9 you have that the way it is.

10 LEDs, we'll talk about LEDs later,
11 but we don't see significant energy savings
12 today with LEDs at all in glass fronts. We
13 use more energy today. We use about ten
14 percent more energy when we use LEDs versus
15 fluorescent lighting today in the box front
16 because it's still evolving.

17 Now, we have not explored
18 refractors and different ways, reflectors and
19 other ways to improve that lightability. We
20 have not gone through that exercise, and I
21 would think that would drive that. We haven't
22 done that.

1 But today the costs for LEDs and
2 LEDs or focused light is difficult, especially
3 when you get in a very tight environment with
4 an LED in a closed front. I don't think
5 you're going to see significant savings.

6 But it will evolve and it will be
7 there. So that's why you see that today the
8 way it is.

9 MR. BROOKMAN: Steven Cousins.

10 MR. COUSINS: Yeah, Doug. I was
11 going to agree with what Trent had said and
12 elaborate even further. Lighting with a Class
13 A versus Class B machine is done differently
14 because the intent and purpose is different.
15 With Class A machines, the lighting is really
16 directed internally so that the product is
17 what's illuminated so that the consumer can
18 make better choices.

19 On the Class B machine, the
20 lighting is directed externally because we're
21 trying to capture customers who may be long
22 distances away, and we're really doing

1 trademark merchandising with a Class B
2 machine.

3 We also have customers. Our
4 primary account customers of Class B machines
5 want to use our merchandising lighting for
6 other purposes, and we're cognizant of that.
7 So actually when Navigant said a one and a
8 half factor in terms of illumination -- and we
9 do have standards around that -- I would
10 expect that it would be more like two and a
11 half just as an intuitive. I don't have --

12 MR. BROOKMAN: Internal standards
13 or --

14 MR. COUSINS: Internal standards.
15 Pepsi may have internal standards as well.

16 MR. BROOKMAN: You wish to achieve
17 a certain level of illumination and
18 brightness, right? And that's what you're
19 referencing.

20 MR. COUSINS: That's right.

21 MR. BROOKMAN: Okay.

22 MR. COUSINS: So I guess what I'm

1 echoing here is that the purpose of the
2 lighting is different between Class A and
3 Class B, and yes, there is significantly more
4 lighting with a solid door, opaque landscaped
5 sign front than there would be with a glass
6 front machine.

7 MR. BROOKMAN: Andrew, I'll return
8 to you, but Glen wishes to speak also.

9 MR. SELFRIDGE: Well, while we're
10 temporarily on this subject, I would also
11 reinforce the difference between Class A and
12 Class B. I would also say that our Type A
13 machine also uses what Navigant calls Super
14 T8s, which actually runs 4-foot tubes on 22
15 watts a piece.

16 So is it possible that your
17 analysis was based on the more conventional 32
18 watt lamp and that you are believing that
19 you're capturing a lot more energy savings
20 than reality would provide when you move in
21 that direction? Because we're already
22 substantially below what you might have used

1 for your analysis.

2 MR. BROOKMAN: I see. Okay.

3 MR. SELFRIDGE: So the advantage
4 isn't as clear.

5 MR. BROOKMAN: Okay. Edwin, do
6 you wish to follow on? No.

7 MR. HORNQUIST: No, thanks.

8 MR. BROOKMAN: Thank you.

9 So additional comments on this
10 series of slides and this subject matter
11 before we move on?

12 MR. SCOTT: Okay. Seeing none.

13 MR. BROOKMAN: Thank you.

14 MR. SCOTT: All right. Next what
15 I'm going to talk about is the shipments
16 analysis that goes into the national impact
17 analysis. Then I'll stop for a second and let
18 Sriram talk after that about how the trial
19 standard levels were chosen, and then I'll
20 come back up and talk about the evaluation of
21 those.

22 Okay. So the purpose of the

1 shipments analysis is to obviously estimate
2 the number of BVMS that we expect to be
3 shipped over time, which has direct bearing on
4 the national impact analysis because over time
5 how many machines out there are being replaced
6 and with what matters.

7 And then so what we're doing there
8 is doing a forecast of shipments, and it was
9 originally derived from historical shipments,
10 and we still look at those; the replacement
11 requirements based on equipment lifetimes; and
12 then the estimate of equipment mix of baseline
13 and higher efficiency technologies in the
14 stock as the older stock is gradually
15 replaced.

16 And actually, Bob, you did a nice
17 job this morning of kind of summarizing some
18 of that.

19 MR. McGARRAH: Sorry about that.

20 MR. SCOTT: No, that's fine.

21 So what we did at the ANOPR stage
22 was look at a bunch of material from

1 consulting companies with reports, some
2 industry periodicals, and we had come up with
3 a small, but -- well, first of all, there had
4 been something of a collapse in the shipments
5 that Bob alluded to earlier from, say, the
6 late 1990s into the early 2000 period, and we
7 acknowledge that, and then we said at the
8 ANOPR period, yeah, but we expect that to turn
9 around and we should have some growth in new
10 shipments.

11 Well, we were told quite
12 forcefully at the ANOPR stage that, no,
13 essentially all the shipments now are going to
14 be for replacement and, furthermore, they're
15 going to be at a fairly low level.

16 And we were able to take what data
17 we had together with the comments, and we
18 arrived at a constant number approximately of
19 replacements only at about 90,000 units per
20 year, and the details of that are in the
21 shipments chapter which is, I believe, Chapter
22 10. Let me look at that for a moment here.

1 Yeah, Chapter 10 of the technical
2 support document, and so then the next
3 question was, okay, you have that many being
4 shipped. What's their distribution across
5 size classes and Class A and Class B machines?

6 We had been led to believe by some
7 of the material that we reviewed before the
8 ANOPR stage that Class B equipment was still
9 the majority of equipment being shipped.
10 Again, at the ANOPR stage we were told no,
11 that somewhere between about 50 and 60 percent
12 of the shipments are now actually Class A
13 machines. That left 45 percent for Class B.

14 Again, in response to comments at
15 the ANOPR stage, we had a size distribution at
16 that point of 33 percent large, 33 percent
17 medium size, and 33 percent small machines.
18 We were told, no, small machines have never
19 been all that popular, and now there are very,
20 very few of them shipped, verging on zero
21 percent.

22 There was a little bit of back-

1 and-forth about the question of the size
2 distribution between medium and large
3 machines. There were about four pieces of
4 different data in that testimony that led us
5 to believe that the median sized equipment was
6 probably about 75 percent of the shipments.
7 Twenty-five percent then would have been
8 large.

9 And so the revised shipments
10 forecast is as you see on the slide, about
11 90,000 a year, reaching out to 2042 a total of
12 about 2.79 million units shipped over that
13 period.

14 That's not enough to sustain the
15 what we believe to be the current stock of
16 around two and a half million units. So what
17 happens over time is that the stock level
18 declines to about a million units, a little
19 less than that by 2020 and then stabilizes
20 through the end of the time period, 2042.

21 And I'll stop right there on the
22 shipments analysis.

1 MR. BROOKMAN: Questions, comments
2 on this analysis?

3 MR. SCOTT: Mostly we're looking
4 for confirmation at this point of did we get
5 it right, approximately at least.

6 MR. BROOKMAN: Glen.

7 MR. SELFRIDGE: You know, for
8 purposes of discussion it's probably all
9 right, but the industry is in further
10 collapse.

11 MR. BROOKMAN: Do you wish to say
12 more about that?

13 MR. SELFRIDGE: Not to go on, but
14 I don't know where it goes from here. What we
15 said last year is kind of reasonable. Now
16 going forward it may be not as reasonable.

17 MR. BROOKMAN: Mike accurately
18 reflected the information that was given to
19 him. You think it could be worse.

20 MR. SELFRIDGE: I believe that
21 just because of the current financial
22 situation and all that it is worse than was

1 discussed.

2 MR. BROOKMAN: You don't see the
3 decline -- you see the decline to go beyond
4 one million units?

5 MR. SELFRIDGE: I don't know.
6 This thing is for discussion. These may be
7 okay, but they may be totally under estimated.

8 MR. BROOKMAN: Trent, Steve?
9 Trent.

10 MR. ROTH: This is Trent Roth,
11 Dixie-Narco.

12 I would, I guess, have to look to
13 Coke and Pepsi for direction, but going from
14 where we are today on a recurring basis, I
15 would say around three million installed base
16 is currently out there. It might be a little
17 bit lower, but it's around there. Down to a
18 million installed base would be very low. I
19 mean, we lose a lot of potential market here,
20 but we're not the ones that make the
21 purchases. We make the machines. So I don't
22 know the direction, but that would be a

1 substantial loss of opportunity to be able to
2 sell products through this channel. So I
3 don't know that it would get that low.

4 I think it's going to go lower
5 than what we have today probably because
6 manufacturing locations are going out of
7 business or primarily that manufacturing
8 pressure we have with schools and carbonated
9 drinks. I do see a decline in the number of
10 where we are today on an installed basis, but
11 getting to a million is extremely low.

12 And I think the operators, not
13 just Coke and Pepsi, the operators out there
14 that have locations will demand equipment to
15 fulfill those locations. So I don't see it
16 getting to a million. I don't see it getting
17 that low. I just think there's too much
18 market share and too much gain.

19 MR. BROOKMAN: Just to confirm,
20 the time frame was 2020 to a million

21 MR. ROTH: Yeah, but that's still
22 production in ten years.

1 MR. BROOKMAN: Ten years. Steve.

2 MR. COUSINS: I would say it's
3 very uncertain to project that the population
4 of installed base of vending machines is going
5 to be stable from where it is now. That's not
6 going to be the case.

7 Yeah, there continues to be a
8 decline of installed base of beverage vending
9 machines, and there will be, and even in our
10 system we're not really sure where that's
11 going.

12 You know, Bob alluded to the fact
13 that if we continue on the trend that we are
14 on, 15, 20 years from now there may not be --
15 you know, full service vending may not exist
16 anymore. That's just based on the trend.

17 We believe that there will be
18 continued reduction, but it will stabilize
19 somewhere, but where it is not going to
20 stabilize at the point of where we are now.
21 There will be continued reduction.

22 MR. BROOKMAN: Bob McGarrah.

1 MR. McGARRAH: I concur with
2 everybody, but I'd like to make an
3 observation. My 45 years in the vending
4 industry allows me access to presidents of
5 most of these vending companies. They help
6 out an old guy every once in a while, and in
7 recent conversations with those folks, they
8 tell me that the industry current number of
9 manufacturers could not stay in business if
10 all they're producing is under 100,000
11 machines a year. That just is not a scale
12 that they can operate on.

13 So there's going to be further
14 reduction. We've had plant closings. We've
15 had tremendous consolidation. Crane/Dixie-
16 Narco is consolidating to the South for
17 economic reasons obviously. Royal has closed
18 one of their manufacturing operations several
19 years ago and is leasing out part of their
20 current manufacturing operation. Vendo, the
21 last third of suppliers, moved into a little
22 plant down in Texas. I don't know what

1 they're doing now. I haven't talked to those
2 folks recently. So this consolidation if it's
3 going to be below the 100,000 level is very,
4 very telling for the industry. It's going to
5 have a tremendous effect on the availability
6 of choice for the Cokes and Pepsis of the
7 world. They'll be narrowed down to possibly
8 one major and one minor source of equipment.

9 I just don't think that's good,
10 but that's up to them. They do the buying.

11 MR. BROOKMAN: Okay. Thank you.

12 Yes, Trent.

13 MR. ROTH: Trent Roth, again,
14 Dixie-Narco.

15 Two comments I would make. Is the
16 majority of the machines in the estimate --
17 and I don't have the exact numbers; we've done
18 some work on this -- but the majority of the
19 machines, actually the majority, I'm talking
20 about 80, 85 percent of the units that are out
21 there today are approaching ten years old. I
22 mean because of the huge influx in numbers

1 that took place in 1998 and 2000, either those
2 are going to go away because they're getting
3 near the end of their life cycle, also with
4 product changes that have taken place and the
5 changes from stacked units or the Class B
6 units, because of the products that go inside
7 them; they're either going to have to be
8 replaced by Coke or Pepsi or Coke or Pepsi
9 slowly are starting to evolve out of the
10 business. Full operators still have those
11 qualifications to drive those as operators. I
12 don't know if there will be a switch in the
13 business because I can't predict the future,
14 but are full line operators going to allow
15 those locations to dwindle? I don't think so
16 either. I mean, they are certainly going to
17 try to keep the place locations, but again, a
18 lot of the equipment purchases need to be off
19 at some point because frankly, those machines
20 will be too old to maintain and not cost
21 effective to maintain in the coming years just
22 because of the aging value that's out there.

1 So I don't believe we're going to
2 see the peaks that we ever did in 1998 or
3 2000. The fact that we did would be bad for
4 the industry because I think that's a lot of
5 what we're paying today the price. I still
6 think a million is too low, and I do think
7 you're going to have to see an influx of new
8 equipment here shortly just because of the
9 aging asset value.

10 MR. BROOKMAN: Thank you.

11 Steven Cousins.

12 MR. COUSINS: I would guarantee
13 that. You have to look at the financial
14 proposition with vending. I mean, the break
15 even point on unit volume case load per year,
16 that continues to fall or that continues to
17 rise rather, and the points of availability
18 continue to rise as well, and beverage
19 companies like Coke and Pepsi, we're
20 constrained with how much we can agree to
21 cost.

22 So the break even point for a

1 vending machine over the past ten years has
2 just continued to climb and climb, and that's
3 not going to change we don't think.

4 So what we've been doing as a
5 system is that we're retiring machines and not
6 replacing them because in some of those
7 occasions those machines were marginally
8 profitable, and that proposition continues to
9 change and has changed dramatically, and Glen
10 made a point around this, you know, given the
11 recessionary times that we've entered into.

12 Now, I'm not saying that the
13 business is going to go away. I don't think
14 it's going to go away, and you made a very
15 good point that the base of the machines is
16 aging, but I guess my key point here is that
17 to assume that the base of machines is going
18 to remain where it is today would be a
19 mistake. I think it is going to continue to
20 fall. We don't know where it is going to go,
21 but it will stabilize, but it will continue to
22 fall.

1 I do agree with you, Trent. It's
2 not going to fall as low as a million
3 machines. It's not. I don't think it will
4 fall as low as two million machines either,
5 but it will continue to fall.

6 MR. BROOKMAN: Yeah, Trent, go
7 ahead.

8 MR. ROTH: I agree with what Steve
9 said. It will continue to fall. I don't
10 think it has stabilized yet. I do think the
11 purchases will eventually have to come up a
12 little in order to maintain that base of two
13 million or one million. I just think one
14 million is too low. I think it needs to be
15 higher than that.

16 MR. SCOTT: Can I inject something
17 here?

18 MR. BROOKMAN: Please, go ahead,
19 Mike.

20 MR. SCOTT: Yeah. Okay. So what
21 I hear is probably won't fall to a million.
22 That's an inevitable consequence of what the

1 stock is right now and what 90,000 a year
2 shipments gets you to.

3 So at some point between 2012 and
4 2020, 90,000 has to go up to some other level
5 to maintain that level of two million. Is
6 that a reasonable number?

7 MR. ROTH: Yes. I mean, correct.

8 You're absolutely correct, and that's why we
9 say have an 80,000 installed base. Eventually
10 it's going to force those purchases just to
11 maintain a level that's 30 percent less than
12 what it is today.

13 MR. SCOTT: Okay. So to be clear,
14 we have to go above 90,000 to get up to
15 stabilize the stock at something over a
16 million.

17 MR. ROTH: At some point to do
18 that, yes.

19 MR. SCOTT: Okay.

20 MR. BROOKMAN: Andrew, let me hit
21 another industry person and I'll come back to
22 you.

1 Go ahead, Bob.

2 MR. MCGARRAH: Just a certain
3 dimension to what 100,000 machines means, it
4 means \$150 million investment, and Coke and
5 Pepsi could address this better than I could.

6 I haven't been there in ten years. But I
7 talk to the bottlers, and those folks are
8 postponing fleet purchases for trucks and
9 vehicles. They're postponing a lot of things
10 now because of the economic turndown, and the
11 first thing they're going to be doing is
12 replacing those trucks and replacing those
13 business essential pieces, and then he will
14 come in at some point after that and post mix
15 equipment will come in at some point after
16 that.

17 So I don't see even a good
18 economic turnaround getting this vending
19 business jump-started as we used to call it
20 for at least five years, and that is going to
21 have a major impact on the manufacturers. One
22 hundred and fifty million dollars is not chump

1 change.

2 MR. BROOKMAN: Consistent with
3 your earlier comment, it will get to the point
4 where they wouldn't have the actual capacity
5 to produce at the levels required.

6 MR. MCGARRAH: Well, that's the
7 manufacturers, but that's something that could
8 happen, yes.

9 MR. BROOKMAN: Trent.

10 MR. ROTH: This is Trent Roth,
11 Dixie-Narco.

12 We will be able to manufacture at
13 the levels because we're only running one
14 shift today. We have opportunity to increase
15 that as we expand or we need to expand. I
16 mean, that's part of what we do.

17 Today, as Bob has brought up, we
18 are the ones combining facilities from our
19 staff facility down to our cold drink
20 facility. That's part of an acquisition that
21 took place three years ago and claimed
22 purchasing assistance by Dixie-Narco, and

1 that's part of an evolution that was fully
2 expected to happen. We had to leverage our
3 assets as a company regarding what
4 manufacturing location.

5 So that's what's happening, but
6 we're all working one shift today. We have
7 opportunity to grow.

8 MR. BROOKMAN: Andrew.

9 MR. deLASKI: I just wanted to
10 comment on the shipments issue. It strikes me
11 that dropping from a current stock of three
12 million down to 30 percent in ten years is an
13 awful dramatic shock drop and also is probably
14 not realistic.

15 I also acknowledge that there's a
16 ton of uncertainty around shipments, but if
17 the stock is twice the size of what your
18 estimate is, that's twice the energy savings.

19 So it has impact in terms of the impact of
20 the rulemaking.

21 The other thing I would just
22 comment on is there's a tendency in the

1 analysis to sort of look at what happened
2 recently and just sort of extracted things,
3 and it sounds like to some extent what will
4 happen perhaps is that at one point we were
5 able with what was happening in the late '90s
6 when they had the curves going up, if they
7 were going to keep on going up like that, now
8 there's been a reaction to that and now the
9 curve is going down. So, okay, it's going to
10 keep on going down.

11 Well, in reaction maybe what we
12 have here is a bit of a cycle like this given
13 the aging stock and that, yeah, some of these
14 actually may be delayed because of the
15 economic times, but they're not going to be
16 put off forever. At some point the machine is
17 going to be replaced.

18 MR. BROOKMAN: Nina.

19 MS. TARLEY: I just wanted to make
20 two comments. One, we might have to retire a
21 group of equipment not only because of the
22 age. As Trent said, most of the group is

1 approaching the life cycle age, but also due
2 to the actual consumption depending on where
3 the DOE mandatory eligibility requirements
4 are. Some of the older equipment will not be
5 able to meet it. So rather than investing the
6 money in upgrading we will have to retire
7 them.

8 And another comment is I really
9 foresee the shifting of business to the Class
10 A versus Class B.

11 MR. BROOKMAN: Okay.

12 MR. SCOTT: May I pursue that a
13 little further?

14 MS. TARLEY: Please.

15 MR. SCOTT: Currently we show that
16 over half are now -- we had numbers 50 percent
17 to 60 percent. There were two different
18 estimates given of current shipments being A
19 Class machines. Going forward, since that's
20 the number we're using going forward, is that
21 approximately correct or do you all want to
22 weigh in and say, "No, no, no, that's

1 different," or there's a trend in the number
2 or something?

3 MS. TARLEY: I wish I could agree
4 to both. It's very difficult to say.

5 MR. BROOKMAN: Thank you, Nina.

6 Steve Cousins, do you have a
7 crystal ball?

8 MR. COUSINS: No. I would say
9 this. It would be a bad one because where
10 Coca-Cola thought we would be four or five
11 years ago, we're not there, and we felt at one
12 time that we would phase from B Class to A,
13 and now that doesn't seem to be the case. I
14 mean, now I think we're buying more solid
15 front machines.

16 I mean the trend is going up to
17 the solid front. I guess what I'm saying is
18 there is no crystal ball that is really going
19 to tell us, you know, exactly where we're
20 going to go.

21 MR. BROOKMAN: Bob -- no, go
22 ahead. Keep going.

1 MR. COUSINS: I wanted to fall
2 back on this whole thing about the population
3 phase. You know, to have the opinion that
4 just because the machine is there that the
5 business is going to stay, there was a time
6 ten years ago we only had to sell 20 cases for
7 a vending machine to make a profit in a year.
8 You know, now we're talking 100 cases, and it
9 keeps going up.

10 Now, you think about if you can go
11 to a vending machine and buy a 20 ounce
12 package cheaper than you can buy it from the
13 convenience store, and there are more
14 convenience stores and they're selling
15 beverages now every place you can imagine; the
16 point I'm making is this. It's not a matter
17 of -- there's a financial proposition here,
18 and there are things that are driving the
19 profitability model through a vending machine,
20 and to think that that model doesn't change is
21 erroneous.

22 I mean, that's one of the reasons

1 why the base of equipment is falling. So to
2 say that, oh, we're always going to maintain,
3 you know, a certain population of machines out
4 there, you know, because of the profit picture
5 or the financial model is not going to change,
6 that's a mistake.

7 MR. BROOKMAN: Thank you.

8 Bob McGarrah.

9 MR. MCGARRAH: Just to comment,
10 the Pogo comic strip had the saying, "We have
11 met the enemy and they are us," and this
12 project, controlling the energy on the vending
13 machine, started way before the economic
14 crisis, and I would suspect that Coke and
15 Pepsi, in light of some regulation changes
16 coming down the road, may have consciously or
17 unconsciously pulled back their purchases not
18 wanting to be stuck with machines that a ten
19 or better year life that may or may not meet
20 standards in five years.

21 I can't talk to that. I don't
22 work there anymore, but that at one time was a

1 consideration that we would make in doing our
2 purchases. Is there any technology coming,
3 particularly on the fountain side when
4 regulations came in regulating five gallon
5 transfer tanks?

6 So when those things happen, the
7 large companies tend to pull back and say,
8 "Let's see where this settles."

9 How many of us are running out and
10 buying a car today until we see where the
11 electric, hybrid, what is coming? So that
12 could be a conscious or unconscious thing
13 that's happening.

14 So we could have created part of
15 this ourselves.

16 MR. BROOKMAN: Okay. Andrew.

17 MR. deLASKI: Just to follow up on
18 a comment from Pepsi, I thought I heard you
19 say that you thought that the standards might
20 cause you to retire equipment early, and I
21 don't understand that comment just because the
22 standards only apply to new sales. So they

1 don't affect what you do with your existing
2 stock.

3 You could refurbish the machine.
4 You could put it back into use. That's not
5 going to be affected by standards on new
6 equipment that sold, manufactured.

7 MS. TARLEY: Yeah, that is
8 correct, and let me just comment to your
9 question as well as the last comment. I don't
10 think that -- well, I can't speak for Coke
11 obviously -- but Pepsi, I don't think we
12 consciously or subconsciously decided to hold
13 back due to regulations. However, what does
14 affect very much our decisions to buy new
15 equipment or refurbish current equipment is
16 the various rebate options, and I could talk
17 with PG&E as one of them.

18 Because of right now a lot of
19 states and utility companies are developing in
20 the midst of developing the rebate options,
21 that definitely will affect what we do
22 refurbish or what we do purchase because

1 everybody knows the energy efficient equipment
2 costs money, and options to buy anything that
3 will make the current equipment more energy
4 efficient also costs a lot of money, and
5 you've already heard a lot of comments about
6 the current economic situation and the payback
7 on the products.

8 MR. BROOKMAN: Please. Use the
9 microphone and say your name for the record.

10 MR. CHASSEROT: My name is Marc
11 Chasserot from shecco.

12 I just had a question regarding
13 shipments. Has anyone looked into the new
14 wave of, you know, vending machines working
15 with hydrocarbons and CO as a refrigerant,
16 you know, and what impact that will have on
17 shipments in the future?

18 Because new technologies are
19 coming in the market and there are lots of
20 others working with this around the world as
21 well, and they're coming to the U.S. I don't
22 know if anyone has looked at that.

1 Thank you.

2 MS. TARLEY: Well, Nina Tarley,
3 Pepsi Co.

4 Pepsi did install several CO
5 vending machines in Washington. Actually some
6 of them you probably can see across the
7 street.

2

8 As far as the energy consumption
9 if that's the question, we don't think that
10 CO will save a lot of energy. We don't think
11 the ²hydrocarbons either will save a lot of
12 energy. They are wonderful, new refrigerants.

13 Pepsi Co. is very, very much interested in
14 pursuing those options, but I don't know if
15 that will have any significant effect on the
16 energy consumption.

17 MR. BROOKMAN: Thank you. Thank
18 you.

19 Trent.

20 MR. ROTH: Trent Roth, Dixie-
21 Narco.

22 I agree with what Nina just said.

1 We are experimenting with other refrigerants.

2 We did not see energy efficiency of CO

2

3 anywhere near what we've already accomplished

4 in 134(a), and to kind of argue with what

5 Greenpeace got into last time was the fact

6 that they challenged our carbon footprint

7 because actually it was a big deal and we use

8 a lot less carbon footprint when we can get a

9 134(a).

10 So we know it's out there. We're

11 aware of it. We're not just a U.S. based

12 company. We do stuff globally, and right now

13 it does not seem to be the way to go.

14 What would drive that will be the

15 appliance industry, quite frankly. If you

16 start building, you know, millions of

17 household refrigerators using CO the

2

18 resources from the manufacturers of

19 compressors, then that industry may change,

20 but the vending industry is not large enough

21 to drive that change with CO . Then it would

2

22 be the appliance industry. So right now we

1 need to wait for that wind to change to really
2 drive efficiencies.

3 MR. BROOKMAN: Marc, follow-on.

4 MR. CHASSEROT: Yeah, just a few
5 points. I mean, I can submit some
6 presentations in time for the deadline, but I
7 have presentations from Coke over the last
8 year or show showing that, for example, CO
9 vending machines are much more efficient than
10 current technology.

2

11 MR. BROOKMAN: Okay. Well, let's
12 hear from Coke.

13 MR. CHASSEROT: But that's not the
14 purpose of this meeting.

15 MR. BROOKMAN: Sure.

16 MR. CHASSEROT: We're not talking
17 about energy efficiencies, but just to
18 highlight that.

19 MR. BROOKMAN: I'm sure the
20 Department would welcome submissions, but
21 let's hear from Coke. Steve Cousins.

22 MR. COUSINS: Nina and Trent are

1 right. CO₂, actually you're all right. It
2 depends on the conditions by which we're
3 operating with CO₂. We're operating
4 transcritical CO₂. We don't have evaporators.
5 We have gas coolers, and what's happening is
6 that the efficiencies go haywire from our
7 testing somewhere around 82 degrees
8 Fahrenheit.

9 So if the operating environment
10 ambient is higher than 82 degrees Fahrenheit,
11 CO₂ is significantly less efficient than
12 134(a). The cooler the ambient, the more
13 efficient it becomes.

14 So operating at what we consider
15 to be 75 degrees Fahrenheit, it can be more
16 efficient. But Trent made a very good point,
17 which is the availability of the pumps that
18 can operate at the right capacity for the
19 efficiencies that we're looking for, and today
20 there is, at least for the North America power
21 grid, there's very small commercial
22 availability, and because of that you don't

1 have the -- in a practical sense you don't
2 have the efficiency with CO commercially
3 available that you have with 133.²

4 Theoretically, it can be done, but
5 the commercial base is not there.

6 MR. BROOKMAN: Okay. Yes, go
7 ahead. Marc.

8 MR. CHASSEROT: Well, I can send
9 some information that would maybe disagree to
10 a certain extent with what's just been said,
11 but I mean, we work with different companies
12 in Japan and in Europe as well. The oldest
13 ones like Sanyo and Embraco, I know not
14 European, and Danfoss, and they are basically
15 telling us, "We're just waiting for those
16 orders from Pepsi and Coke." Their technology
17 is ready.

18 But that's maybe not the purpose
19 of this meeting, but just so that you know.

20 MR. BROOKMAN: I'm sure they heard
21 you though.

22 MR. CHASSEROT: And one other

1 point, can I make one final point?

2 MR. BROOKMAN: Yes, please.

3 MR. CHASSEROT: In Japan, for
4 example, this is a market. This is already
5 commercial this year, the vending machines.
6 They're already selling close to 100,000 units
7 in Japan alone right now. So I mean, this is
8 a technology that's already existing.

9 I know that Japan is slightly
10 different from the U.S., but still it's just
11 for you to know.

12 MR. BROOKMAN: Let me go to Steve
13 first, Nina. Steve Cousins.

14 MR. COUSINS: All of the companies
15 you mentioned don't make CO systems for the
16 North America power grid. None of them do.

17 MR. CHASSEROT: I'm sorry. I
18 didn't --

19 MR. COUSINS: None of those
20 companies you mentioned make CO compressors
21 for 115 volt, 60 hertz, which is for North
22 Americans. They're building 220/50, 90/50.

1 They're building these for other power grids,
2 not for North America.

3 So what I said a moment ago is
4 theoretically CO can be more efficient in a
5 very practical sense. It's not commercial
6 here in North America where we can use it.

7 And as Trent mentioned a moment
8 ago, the commercial proposition is not there
9 yet. If domestic goes into that front, then
10 it becomes available to us on the commercial
11 side, but it's just not commercially there
12 right now.

13 MR. BROOKMAN: Let's go to Nina
14 and then over to Glen.

15 MS. TARLEY: I do agree with my
16 distinguished colleague. One point of
17 clarification I would like to make.

18 In three simple you are correct.
19 CO , depending on the temperature, could
20 potentially be slightly more energy efficient,
21 but we're not comparing apples to apples here.
22 I want to make very clear when you develop a

1 new piece of equipment, be the glass front
 2 versus back then or your CO₂ machine, you use
 3 brand new compressor. You use brand new, most
 4 efficient motors. The whole system in itself
 5 is more efficient.

6 That's why some of the glass from
 7 the vendors consume less energy than standard,
 8 not because glass front consumes less energy.

9 Because the system is more energy efficient.

10 And the same with CO₂. We develop
 11 brand new compressors. We develop brand new
 12 systems that allows us the best air flow. It
 13 is that way we are able to save some energy on
 14 the CO₂ vending machine versus the current R-
 15 134(a).

16 But it's not basically because CO₂
 17 is more energy efficient; because the system
 18 itself is more energy efficient.

19 MR. BROOKMAN: Okay. Thank you.

20 Glen.

21 MR. SELFRIDGE: Only one comment
 22 in passing. Hydrocarbons were also mentioned.

1 It's the same type of an issue in North
2 America in terms of regulatory. People don't
3 want refrigerators at the moment; it's illegal
4 actually to build them that way by using a
5 hydrocarbon refrigerant. This may change over
6 time.

7 Again, it would be people like the
8 GEs of the world or the . This is not Europe.

9 We have a completely different set of codes,
10 standards, opinions on safety as compared with
11 Europe and the rest of the world. So that is
12 not something we can assume.

13 MR. BROOKMAN: Okay. Thank you.

14 So in a little bit we're going to
15 take a break just so you're knowing that we
16 will do that. This has been a very productive
17 conversation, and I really appreciate
18 everybody speaking up and contributing all of
19 this information, all of this knowledge to the
20 Department.

21 So I'm going to return to the
22 slides, and then we'll see where we stand

1 after one or two more slides.

2 Mike.

3 MR. SCOTT: Okay. I have one more
4 detail I want to nail down. Sorry about this.

5 That final bullet on Slide 24, we
6 assumed that the side distribution was going
7 to be 75 percent medium, 25 percent large,
8 zero percent small. That's actually a
9 reasonably important assumption for the
10 downstream analyses, the net present value
11 analysis and so on.

12 Did we get it right?

13 MR. BROOKMAN: What do you think?

14 Yeah, Trent.

15 MR. ROTH: Can you define the --
16 I'm just looking for it -- can you define
17 please what large and small is?

18 MR. SCOTT: I think we can get
19 some help from Sam on that.

20 MR. ROTH: Sure.

21 MR. JASINSKI: So in terms of
22 refrigerated volume for Class A, a small

1 machine would have 19 cubic feet. Medium
2 would be 31.

3 MR. SCOTT: No, that's from the A
4 number.

5 MR. JASINSKI: Oh, sorry. I'll
6 give you the updated one. Seventeen for
7 small; 22 cubic feet for medium; and 34 cubic
8 feet for a large. That's Class A.

9 Class B would be 17 for a small,
10 22 for a medium, and 26 for a large. I also
11 have can capacities if you'd like those.

12 MR. BROOKMAN: So, Sriram, follow-
13 on?

14 MR. SOMASUNDARAM: Yeah. That's
15 in the Table IV-1 on page 26026, vendable
16 capacity as well as the refrigerated volume?

17 PARTICIPANT: Zero, two, eight.

18 MR. SOMASUNDARAM: Zero, two,
19 eight, yeah. Top of the page 2602.

20 MR. BROOKMAN: So I can read those
21 numbers back again if you want me to. Have
22 you got them?

1 Okay. So then Mike is asking you
2 for whether these distributions, whether they
3 are appropriate or not, 75 percent medium, 25
4 percent large, zero percent small for both
5 Class A and B.

6 Zero is too small? Yeah, there
7 will be some shipments that are small, yeah.

8 MR. SCOTT: Do you want to put a
9 number on it? Five percent, 10 percent?

10 MR. ROTH: I guess if I look at
11 the manufacturers, but I don't think any falls
12 in small. I don't think there's anything
13 else --

14 MS. TARLEY: No, I don't think 17
15 exists.

16 MR. COUSINS: I'm okay with those
17 numbers.

18 MS. TARLEY: Yeah, but why define
19 a category which doesn't exist? We don't have
20 anything 17.

21 MR. BROOKMAN: Seventeen cubic
22 doesn't exist.

1 MS. TARLEY: No.

2 MR. BROOKMAN: Oh, I see. What
3 would be the smallest?

4 MS. TARLEY: I think 19 or 20
5 probably would be.

6 MR. BROOKMAN: Okay. So then
7 there's a reason why it's zero.

8 MS. TARLEY: All right.

9 (Laughter.)

10 MS. TARLEY: That's right.

11 MR. BROOKMAN: Because it doesn't
12 exist, right?

13 MS. TARLEY: In Category A.

14 MR. BROOKMAN: Yeah, right.

15 MR. SELFRIDGE: I think as I
16 recall there is one.

17 (Simultaneous conversation and
18 laughter.)

19 MR. BROOKMAN: Okay. So we've
20 heard from Steve. Steve thinks the numbers
21 are okay. Other comments on the numbers?
22 Glen, go ahead. Glen, we didn't hear you.

1 I'm sorry.

2 MR. SELFRIDGE: Nothing. A Class
3 B machine, a very small machine does get down
4 into that.

5 MS. TARLEY: Yes, correct, but not
6 in Class A.

7 MR. BROOKMAN: Okay, and also a
8 very small number?

9 MR. SELFRIDGE: Very small
10 numbers.

11 MR. SCOTT: One percent, five
12 percent?

13 MR. ROTH: Are we saying 25
14 percent in the large category?

15 MR. SCOTT: Yes.

16 MR. ROTH: That may be higher. I
17 mean, ours is the large category. So I don't
18 know. It could be higher than that.

19 MR. SCOTT: Okay. I'm trying to
20 be really clear about this. Class A machines,
21 we've got zero, 75, 25 as we go up. What
22 should the distribution be?

1 MR. BROOKMAN: 60/40?

2 MR. ROTH: 60/40? I don't know.

3 MR. BROOKMAN: 60 medium, 40
4 large?

5 MR. ROTH: 60/40.

6 MR. SCOTT: Okay. What about B?

7 (Pause.)

8 MR. BROOKMAN: So there's still
9 time to receive written comments on this
10 matter, right?

11 MR. SCOTT: That's a good idea.

12 MR. BROOKMAN: Yeah.

13 MR. SCOTT: Because it drives so
14 much of the downstream analysis, early would
15 be really good on comments about that.

16 MR. BROOKMAN: Okay, right.

17 MR. ROTH: This is Trent.

18 I would recommend that we use NAMA
19 as maybe somebody that could filter out what
20 we sell so that maybe as manufacturers we
21 could get a third party and have them compile
22 it. We could -- somehow they could compile it

1 and then we could get back to what they --

2 MR. BROOKMAN: Is there a
3 representative from NAMA in the room?

4 MR. MONROE: I'll ask.

5 MR. BROOKMAN: You'll ask?

6 MR. MONROE: It will be up to the
7 manufacturer, I guess, to give us this
8 information.

9 MR. BROOKMAN: Did you hear what
10 Mike said? This drives a whole bunch of
11 important analysis and they need it quickly.
12 Okay? Good.

13 Yes, I see some Navigant folks
14 wanting to speak up. Please say your name.

15 MR. MILLARD: Yeah, Matt Millard.

16 It would also be very helpful if
17 we could have the volumes attached to the
18 shipment estimations because there's a lot of
19 uncertainty as far as what some people
20 consider --

21 MR. COUSINS: You can forget about
22 that.

1 MR. MILLARD: -- what some people
2 consider small and medium. So just saying
3 that small is a certain percentage and medium
4 is --

5 MR. BROOKMAN: But if they
6 aggregate it they can't do that?

7 MR. McGARRAH: There's only two
8 buyers.

9 MR. BROOKMAN: Okay, yeah.

10 MR. ROTH: You're talking cubic
11 volume, not --

12 MR. MILLARD: Right, right, cubic
13 volume. Refrigerated volume.

14 MR. ROTH: We're talking about
15 refrigerated volume.

16 MR. BROOKMAN: Thanks for
17 clarifying that.

18 MR. MILLARD: Sorry.

19 MR. BROOKMAN: Go ahead.

20 MR. SOMASUNDARAM: My comment was
21 going to be we have asked NAMA for those data
22 since the ANOPR meeting, and we haven't got

1 anything from the industry. So I just would
2 put that word of caution.

3 MR. BROOKMAN: Yes. So would you
4 say your name for the record?

5 MR. MONROE: Ned Monroe.

6 MR. BROOKMAN: Ned Monroe. Thank
7 you, Ned.

8 So appreciate your efforts to try
9 to get that done for the Department.

10 Bob.

11 MR. MCGARRAH: Let me just comment
12 on that. There's two people that are buying
13 99 percent of the machines. So they give
14 their numbers anonymously to NAMA and they
15 extrapolate their number and they know what
16 the other guy is buying. It ain't going to
17 happen. They're not going to give you the
18 number.

19 MR. BROOKMAN: Okay. So that's
20 good to know.

21 MR. MCGARRAH: That's like telling
22 your market share behind the table. It's a

1 very competitive industry. We fight all the
2 time as an industry in a friendly way, and
3 it's just numbers that I can't believe them
4 sharing because they're the two major buyers.

5 MR. BROOKMAN: Trent, go ahead.

6 MR. ROTH: This is Trent, Dixie-
7 Narco.

8 I guess I might even ask the
9 Department of Justice here, too, but I believe
10 it's a minimum of three. There are three
11 manufacturers. There's Vendo, Royal and us
12 are supplying numbers. They should be able to
13 show aggregate market share or aggregate
14 numbers based on that.

15 It has always been my
16 understanding you had three manufacturers.
17 You have to get at least three in order to be
18 able to share that.

19 MR. BROOKMAN: Okay

20 MR. SCOTT: This is Mike Scott
21 again, and just to be clear, we're not asking
22 for shipments volumes at all. We're asking

1 for distribution across size classes here,
2 percentage, not numbers.

3 MR. MILLARD: Right. This is Matt
4 Millard again.

5 I was referring more to
6 refrigerated volume because what some people
7 may consider a small machine other may not.

8 MR. BROOKMAN: Okay. So I think
9 we have cleared this up now. Let's do the
10 final slide and then we're going to take a
11 break. On approach.

12 MR. SCOTT: Okay, on approach, and
13 we're going to be talking -- actually this
14 would be a really good place to break because
15 this is the approach for the national energy
16 savings calculation.

17 MR. BROOKMAN: You want to break
18 now?

19 MR. SCOTT: We should do the TSLs
20 first. So I think this would be a good place
21 to break.

22 MR. BROOKMAN: Okay. So let's

1 take a break. It's now 11 o'clock on the
2 nose.

3 I think we're going to extend the
4 break for 20 minutes in case those of you want
5 to go halfway to the Capitol for coffee.
6 Really, the most convenient place is closed
7 downstairs. If you want to get coffee, you
8 need to go to the main cafeteria, which is
9 downstairs and about a half a block that way.

10 So let's try and resume at 11:20.

11 Do you have a question or comment?

12 MR. HORNQUIST: Just a quick
13 question. This is Edwin Hornquist, Southern
14 Cal. Edison.

15 I was just noticing that the
16 refrigerated volume referred to here is --
17 well, the title is "Refrigerated Volume." In
18 the class fee the refrigerated volume is, as I
19 understand it, a compartment within this. Is
20 that the entire system?

21 PARTICIPANTS: No.

22 MR. BROOKMAN: I'll tell you what.

1 Maybe you could just ask on the break. Let's
2 go to a break and then if we need to take this
3 back up when we resume we will.

4 Okay. Can you just consult with
5 the Navigant folks?

6 MR. HORNQUIST: Yeah.

7 MR. BROOKMAN: Yeah. We'll resume
8 at 11:20 right here.

9 (Whereupon, the foregoing matter went off the
10 record at 11:03 a.m. and went back
11 on the record at 11:19 a.m.)

12 MR. BROOKMAN: Let's start.

13 Let me start off on behalf of the
14 . I don't work for the Department, but we're
15 trying to get them a good research, and so let
16 me start off on behalf of the Department
17 saying thanks for that conversation we had
18 prior to the break. I thought that was very,
19 very useful. I appreciate everybody speaking
20 up and saying what they know to be the issues.

21 That's very helpful to the Department.

22 So we're going to then proceed.

1 Edwin, did you get your question answered?

2 MR. HORNQUIST: Well, it raised
3 other questions. Never mind. So I just want
4 to understand what the refrigerated
5 compartment within the Class B machines
6 represents. Is that the refrigerated volume
7 that the refrigeration cites to, or is it the
8 entire volume where the entire product, even
9 the product that is not refrigerated or
10 presumably not refrigerated in my mind, is
11 assumed to be?

12 MR. ROTH: This is Trent.

13 MR. BROOKMAN: Thanks, Trent.

14 MR. ROTH: I'll try to answer that
15 one. I'll take technical help if I get out of
16 line.

17 We refer to the volume as the
18 entire volume within that cabinet. That is
19 the volume that is being cooled. Now it is
20 slightly different. We direct all the air
21 flow to the bottom one-third of the cabinet.
22 So we're cooling those cans in the bottom one-

1 third, but there's transfer of the cold air
2 because of the stacking, what we call stack.
3 We literally take -- I'll get more exact later
4 -- but for instance, our 504 Dixie-Narco stack
5 unit, we stack 504 cans into eight columns --
6 seven columns straight up and down. So we're
7 directing the air flow to the bottom one-
8 third. The whole cabinet is refrigerated
9 because you're going to get transfer of cold
10 air through conduction from the cold cans.

11 You are cooling all of those cans.
12 The ones at the bottom are kept at 36
13 degrees, plus or minus one degree, as stated
14 in the ASHRAE standard. The upper cans may
15 reach 50 degrees or somewhere in there, but
16 they still are being cooled because as those
17 get hot, you know, in the environment, they're
18 still going to require or steal cold air from
19 those cold cans on the bottom third, but the
20 bottom itself is the entire cabinet because
21 that is, in fact, refrigerated. It's just how
22 you're directing the air flow.

1 So the cabinets are all
2 refrigerated. We're just focusing the air.

3 Does that help?

4 MR. HORNQUIST: Yes, absolutely.

5 So the question would be if the delta T
6 between the temperature that you're cooling
7 one-third of the product is lower or higher
8 than the delta T for two-thirds of the
9 product, because the refrigeration sizing
10 obviously is taken into consideration --

11 MR. ROTH: Refrigeration sizing
12 has more to do when you talk about this with
13 the cool-down requirements, and I'll use
14 specifically Coke since they have the toughest
15 cool-down requirements, but the size of our
16 compressor is more or less based upon not
17 keeping that product at 36 degrees plus or
18 minus one, but how fast can we cool the entire
19 product down and let's put in more, and that's
20 really driving what our size of our compressor
21 is, maintaining product at 36 degrees.

22 MR. BROOKMAN: And that's

1 something they specify for different classes
2 of --

3 MR. ROTH: That's specifies as a
4 requirement, a test requirement, for pull-
5 downs.

6 MR. HORNQUIST: So when you take
7 it from something like 70 or something degrees
8 to --

9 MR. ROTH: What temperature do we
10 take it from? Seventy-something?

11 MR. COUSINS: Condition C
12 currently in Coke? It's actually full reload
13 recovery requirement that drives the
14 refrigeration load. So --

15 PARTICIPANT: Ninety.

16 MR. COUSINS: -- yeah, that's what
17 we consider at the moment, but I guess to
18 elaborate on that driver, based on how we do
19 business, based on how we do business and when
20 a machine gets visited and reloaded and how we
21 set up full service vending for the amount of
22 packages that need to be restocked, we have a

1 requirement that we want the machine to be in
2 business at the first peak purchase period
3 after the reload, and that drives our
4 standard.

5 So that the temperature and the
6 time requirement which forces these guys to
7 size the equipment a certain way is based on
8 that?

9 MR. HORNQUIST: I'm curious.
10 What's the time that you require? Can you
11 tell me that?

12 MR. COUSINS: No, I can't.

13 (Laughter.)

14 MR. BROOKMAN: Okay. Well, thank
15 you. That was useful.

16 So now we'll proceed with Sriram.

17 MR. SOMASUNDARAM: Right. Sriram
18 Somasundaram, Pacific Northwest National
19 Laboratory.

20 A slight reorder of slides. We
21 stopped at , and I'll have Mike Scott come
22 back up after I talk about the next two

1 slides, 28 and 29, and then he'll tell you
2 about the approach that we took to do the NPV
3 analysis and then report the results of it.

4 The reason we thought this might
5 be more useful for the discussion here is that
6 we assess the NPV, the net present value, or
7 the national energy savings analysis impacts,
8 only on the TSLs that we pick at this stage of
9 the analysis.

10 So we have to first pick the TSLs
11 of the standard levels for which the analysis
12 will be continued and report the results for,
13 and the way we pick those, if some of you
14 remember, the ANOPR analysis we reported what
15 were called the candidate standard levels.
16 There were a few standard levels that we had
17 decided would form the basis of this step of
18 the analysis at the end of the ANOPR analysis.

19 And so if we go back to that step
20 and then we say, "Okay. What levels still
21 make sense to pursue for the NOPR analysis?"
22 and the methodology used to select these trial

1 standard levels at this stage are that we pick
2 the most energy efficient level, the Max Tech
3 level as sort of the end of the range. So
4 the TSL-7 or the TSL-6 as the case may be, in
5 fact, is the Max Tech level.

6 Then we also pick some
7 intermediate levels between that and the
8 baseline. The baseline in this case is the
9 ENERGY STAR Tier 1 that went into effect or
10 something close to that is the baseline level,
11 which is what all the energy savings get
12 compared to.

13 So in between these two extremes,
14 we picked the efficiency levels that either
15 have a lowest life cycle cost or a payback
16 period of three years or less, efficiency
17 levels with some noteworthy technologies, for
18 example, like the LED lighting or a condenser
19 motor switch technology from PSC motor to an
20 ECM motor, for example, would be an example of
21 a noteworthy technology.

22 And then if we still have some

1 gaps between those efficiency levels, we will
2 pick some intermediate levels to fill the gaps
3 that may or may not have a combination of
4 technologies that result in those energy
5 consumption levels.

6 So with that introduction to the
7 selection process, we came up with seven TSLs
8 for Class A beyond the baseline and six TSLs
9 for Class B beyond the baseline.

10 And having picked an energy
11 consumption level for each of those TSLs, we
12 then developed correlations as a function of
13 refrigerated volume for medium and large size
14 machines using the two point lines or drew a
15 line across those two points for both Class A
16 and Class B, and that's how we came up with
17 these correlations for MDEC, which is maximum
18 daily energy consumption as a function of the
19 volume for Class A and Class B.

20 As you can see, even though, for
21 example, we call it the TSL-5 for both Class A
22 and Class B, but as you can see, the levels

1 are not the same. The energy consumption will
2 not be the same because you see the
3 coefficients will be and the intercept values
4 are different. So please remember that.

5 So having set these, having picked
6 these trial standard levels, Michael will now
7 describe how we assess the impacts of each of
8 those levels.

9 MR. BROOKMAN: And fortunately for
10 your purposes, both of these slides are on the
11 same open page. So you can refer back and
12 forth.

13 MR. SCOTT: Good plan.

14 MR. BROOKMAN: That was well done.

15 MR. SOMASUNDARAM: So let's go
16 back to 26.

17 MR. BROOKMAN: The approach.
18 Mike.

19 MR. SCOTT: Okay. With that as an
20 introduction, what we then did was estimate
21 the national energy savings and the national
22 impact analysis present value of savings for

1 those TSL levels, and one of the things that
2 we want you to note is that the national
3 energy savings are calculated for that 30-year
4 period that I indicated earlier, plus the
5 national present value by the convention that
6 the Department uses is that we count the
7 present value of the economic savings from all
8 equipment purchased during the 30-year period
9 so that 2012 to 2057 actually includes the
10 lifetime of everything purchased in 2042 as
11 well as everything before then.

12 We then came up with a base case
13 for the national energy standard or national
14 energy savings and national impact analysis,
15 and to do that we had to make an assumption or
16 series of assumptions about what would have
17 been shipped in the absence of the standards,
18 and as originally we had a fairly complicated
19 way of estimating what those efficiency levels
20 would be that the market generated, we were
21 told at the ANOPR stage that, no, it's really
22 a much simpler problem than that. All you

1 have to remember is that there are two big
2 purchasers and some smaller purchasers, and
3 they essentially have wanted TSL -- sorry --
4 trial standard level -- trial standard level?
5 - ENERGY STAR level Tier 1, which is our Level
6 1 in this diagram, since it was available,
7 since ENERGY STAR went into effect.

8 And then by the year 2012 just
9 about everything that would be purchased by
10 the larger purchasers anyway would be Tier 2,
11 and that roughly is equivalent to Level 2 for
12 Class A equipment and it's Level 3 for a Class
13 B equipment.

14 We did allow for some purchases in
15 between Tier 1 and Tier 2, but it's a
16 relatively small amount. So essentially we've
17 got a 10/90 split for the unregulated market.

18 Then when standards are imposed as
19 we show in the third bullet on this slide,
20 everything below the level of the standard
21 gets rolled up to the standard level. So, for
22 example, with no standard with a medium

1 equipment, we would have a ten percent at
2 Level 1, 90 percent at Level 2. But then with
3 a Level 4 standard it would all be Level 4 or
4 higher.

5 There was no indication that there
6 would be any equipment purchased above
7 whatever the maximum level was for ENERGY STAR
8 or, alternatively, the equipment purchased
9 under the standard. So Levels 5 through 8
10 were not affected by the standard unless the
11 standard is set at that level.

12 Okay. So once a standard is in
13 place, then the old equipment, the stock of
14 the equipment goes out of the inventory
15 according to its base case efficiency mix,
16 that or actually there's equipment that's
17 older than that that's still less efficient
18 according to the base efficiency mix, and then
19 new equipment is sold under the standard to
20 replace the equipment according to the new
21 efficiency mix.

22 And then we simply keep track of

1 all of that using national average customer
2 prices for the equipment, annual energy prices
3 and annual repair and maintenance captured
4 from the LCC analysis. And that's all
5 calculated then over the period under which
6 we're working here.

7 So then flipping over to Slide 30,
8 the net present value results, for Class A
9 equipment the standard that the Department
10 arrived at look at net present values and the
11 other features of the various trial standard
12 levels.

13 TSL-6 was the level chosen for
14 this analysis, and it provided a maximum NPV
15 of \$0.105 billion at a seven percent discount
16 rate, roughly double that at the three percent
17 discount rate, and all trial standard levels
18 lower than TSL-7 showed a positive NPV.

19 For Class B equipment, TSL-3
20 provided a net present value of essentially
21 zero at the seven percent discount rate. All
22 trial standard levels lower than TSL-4 had a

1 positive NPV, but everything TSL-4 and above
2 did not.

3 I guess this is the point at which
4 we can either answer questions about the NPV
5 analysis or alternatively the issue on which
6 DOE seeks comments, specifically on the trial
7 standard Level 6 and 3, respectively.

8 MR. BROOKMAN: Well, let's see if
9 there are any questions on the foregoing
10 slides. On the approach slide, the selection
11 of trial standard levels, and the matrix, the
12 trial standard levels listed for Class A and
13 B, and also for 30, NPV results. Questions,
14 comments on those? That's quite a lot of
15 content there. Bob.

16 MR. MCGARRAH: I'm a little
17 confused here. Current machines and machines
18 purchase by Coke and Pepsi since 19 --

19 MR. BROOKMAN: Bob, get closer to
20 that mic.

21 MR. MCGARRAH: Bob McGarrah.

22 Current machines purchased by Coke

1 and Pepsi and purchase by them probably since
2 2003 meet ENERGY STAR Tier 1. Many of them
3 meet ENERGY STAR Tier 2, certainly the ones in
4 the past several years. And I'm trying to
5 understand how the set level --

6 MR. SCOTT: How the analysis --

7 MR. McGARRAH: -- the set level
8 that you're going to establish relates to
9 ENERGY STAR Tier 2.

10 MR. SCOTT: Okay. Well, for A
11 Class machines, TSL-6 is more efficient than
12 ENERGY STAR Tier 2, which is, I think Level 2;
13 is that right?

14 MS. TARLEY: Can you tell what
15 percentage? When you say more efficient, by
16 what percent?

17 MR. SCOTT: We're talking kilowatt
18 hours per day.

19 MR. LLENZA: So it's like 30
20 percent?

21 MR. SCOTT: Oh, I'm sorry. You
22 wanted to know the percentage?

1 MS. TARLEY: Yes.

2 MR. LLENZA: It's about 30, 31

3 percent, something like that.

4 MS. TARLEY: Thirty-one percent?

5 Thank you.

6 MR. BROOKMAN: We'll check out

7 that.

8 MR. SCOTT: He's looking. Just a

9 minute.

10 MS. TARLEY: I calculate around

11 20.

12 MR. BROOKMAN: So, Nina, that last

13 comment, say it again. You calculate it's

14 about 20?

15 MS. TARLEY: That's my

16 calculations show, but --

17 MR. BROOKMAN: I think Trent also

18 wanted to chime in.

19 MR. ROTH: We calculated -- this

20 is Trent Roth -- we calculated 20 percent

21 reduction. We went 20 percent for Tier 1 and

22 Tier 2. It looks like we're going 20 percent

1 for Tier 2 to the schedule.

2 MR. SCOTT: Oh, okay.

3 MR. ROTH: So from Tier 1 it would
4 be greater, but it looks like 20 percent
5 increments as you went down, and this is a
6 percent decline.

7 MS. TARLEY: For Class A.

8 MR. ROTH: For Class A.

9 MS. TARLEY: Class B it's higher.

10 MR. BROOKMAN: And are those
11 increments, they're consistent?

12 MR. ROTH: Yeah, they are
13 consistent. In Tier 1, energy is higher in
14 2004. 2007 was about a 20 percent level.

15 MR. BROOKMAN: So then, Sam,
16 having looked at the data, for the record,
17 what--

18 MR. SCOTT: We're still getting
19 one more number.

20 MR. BROOKMAN: Okay. Come to a
21 conclusion. I'm coming back to you.

22 MR. SCOTT: This is the advantage

1 of paper and pencil, the old school way.

2 MR. JASINSKI: This is Sam
3 Jasinski from Navigant.

4 Our calculations show that for
5 Class A the proposed TSL-6 is roughly 30
6 percent more efficient than ENERGY STAR Tier 2
7 and for Class B, the proposed TSL-3 is roughly
8 five percent more efficient than ENERGY STAR
9 Tier 2.

10 MR. BROOKMAN: I see, Nina, you're
11 shaking your head.

12 MS. TARLEY: Yeah, my number won't
13 be definitely much higher.

14 MR. BROOKMAN: So maybe they'll
15 continue to do their calculations over here
16 and I'll return to Bob. You were in the
17 middle.

18 MR. MCGARRAH: I was just trying
19 to put a dimension on this.

20 MR. JASINSKI: Well, as a
21 clarification, we did it for the medium size
22 class in each class.

1 MR. BROOKMAN: Okay. So pardon
2 me, Bob. Let me continue with this. Trent.

3 MR. ROTH: This is Trent, Dixie-
4 Narco.

5 It's just important to note that
6 you're not going to get an exact translation
7 to those.

8 MR. SCOTT: Right.

9 MR. ROTH: We switched from can
10 capacity to cubic capacity. So although I can
11 show you where the formulas seem to line up,
12 and we'll do that a little bit later, but it
13 does change.

14 Also, when you get to Class B -- I
15 know we're only talking Class A -- Class B,
16 you're going to get a significant difference
17 because we're going from 90 degrees, 65
18 percent relative humidity, to 75/45. So there
19 you really are not going to compare apples to
20 apples at all.

21 But in the Class A one, you need
22 to understand that the variables will change

1 slightly by model, by manufacturer and how
2 much we're coming down because the can
3 capacity and cubic capacity are not in direct
4 correlation with each other.

5 So we will get some variance on
6 that, but that's all right.

7 MR. BROOKMAN: Okay.

8 MR. ROTH: And that's the way it
9 is.

10 MR. BROOKMAN: Okay. Thanks for
11 that clarification.

12 Do you wish to say anything more
13 now, Nina?

14 MS. TARLEY: No, no.

15 MR. BROOKMAN: You all set? Okay,
16 okay. Well, they'll continue to take a peak
17 at that.

18 Bob.

19 MR. MCGARRAH: Tell me what I'm
20 saying wrong. The current standard that
21 you're proposing will be between 20 and 31
22 percent higher than ENERGY STAR Tier 2 for

1 Class A machines.

2 MS. TARLEY: Lower.

3 MR. JASINSKI: More efficient.

4 MR. McGARRAH: More efficient.

5 MR. JASINSKI: Yes.

6 MR. McGARRAH: And for Class B

7 machines, it will be five percent more

8 efficient than ENERGY STAR Tier 2.

9 MR. JASINSKI: Yes.

10 MR. MILLARD: This is Matt Millard

11 again.

12 As Trent said, it's more difficult

13 for me to develop that relationship because we

14 estimated what the ENERGY STAR level would be

15 if it dropped down to 75 degrees.

16 MR. JASINSKI: For clarification,

17 this is Sam Jasinski; for clarification,

18 ENERGY STAR ratings are based on a 90 degree

19 Fahrenheit ambient temperature test for Class

20 B machines, and the Department of Energy test

21 procedure mandates a 75 degree ambient

22 temperature.

1 MR. McGARRAH: I want to simplify
2 it so I can explain it to people where it is
3 from where we were at ENERGY STAR II to where
4 we're going to be with this new regulation,
5 and I think you did a pretty good job of
6 saying -- I don't mind a range. A range is
7 good -- the current proposed standard will be
8 20 to 31 percent greater for Class A machines
9 than ENERGY STAR Tier 2, and one to five
10 percent greater, meaning requiring more
11 efficiency, than ENERGY STAR Tier 2 for B
12 machines.

13 MR. JASINSKI: That's correct.

14 MR. McGARRAH: Could we just write
15 that down?

16 MR. BROOKMAN: You don't think
17 it's written down somewhere?

18 MR. McGARRAH: No. I'm having
19 trouble translating this.

20 MR. BROOKMAN: I see.

21 MR. McGARRAH: No, to be honest
22 with you.

1 MR. BROOKMAN: Okay. Then we'll
2 mull on that point. Are there other questions
3 and comments then on this series of slides?
4 There's a lot of content here.

5 Yes, Trent.

6 MR. ROTH: It might help you, Bob.
7 This is Trent from Dixie-Narco.

8 I'll give you a specific example
9 so you will maybe -- these are large glass.
10 We have a 405 can capacity at Tier 2 levels.
11 We have a threshold of 5.56 kilowatts an hour
12 for a daily hit. Under the new regulations in
13 Class A, based on our cubic capacity, we have
14 a new threshold that we have to hit of 4.48
15 kilowatts per day. So that's roughly a 20
16 percent reduction.

17 MR. McGARRAH: From six to four.

18 MR. ROTH: From 5.56 to 4.48. So
19 that's the best translation I can give you --

20 MR. McGARRAH: No, that's good.
21 That's exactly --

22 MR. ROTH: -- all our models, but

1 roughly in Class A it represents to us, Dixie-
2 Narco, approximately 20 percent.

3 MR. MCGARRAH: I think for me it's
4 important to dimensionalize it so I can talk
5 to the average folks and say, "This is what
6 you're looking at. If you go to ENERGY STAR
7 Tier 2, you're going to have to get this much
8 more efficient with the new machine." That's
9 all.

10 MR. ROTH: The threshold is that
11 much more. There are those of us that are
12 well beyond that already.

13 MR. MCGARRAH: Yeah.

14 MR. BROOKMAN: Okay. Thank you.
15 Thanks for that illustration. That was
16 helpful.

17 MR. MCGARRAH: Very.

18 MR. BROOKMAN: Now, any additions
19 on these slides? Because we're about to move
20 to wanting to seek specific comment on Slide
21 30 and then 31.

22 Andrew, did you have something?

1 MR. SELFRIDGE: I had.

2 MR. BROOKMAN: You had something,
3 Glen. Thank you. I left somebody out.

4 MR. SELFRIDGE: And what I had
5 basically was, number one, I had mentioned
6 this before. California Energy Commission on
7 their public site is required by California
8 Law of 75 degrees and 90 degree results by
9 model number for every machine that's legal to
10 sell in the State of California, public
11 information, you can use it.

12 Secondly, if you look at our list,
13 there are no energy management systems that
14 are used during the ASHRAE test. Okay? To
15 come up with those numbers, as Trent
16 mentioned, a year ago others do that and it's
17 perfectly legitimate. Okay?

18 But if you're looking at something
19 like LED lighting and were to pick Trent's
20 number, the lighting is already backed out of
21 it similar to what I had talked about with our
22 Super T8s.

1 So be careful on your calculations
2 of baseline because you've got some errors
3 here that are becoming more and more apparent
4 as you move through on Class A.

5 MR. JASINSKI: Sam Jasinski.

6 Just for the record, those
7 California Energy Commission numbers were used
8 in our analysis. They can be -- you can find
9 them in Chapter 3 of the TSD.

10 MR. BROOKMAN: Okay. Thank you.
11 Thank you for that.

12 Andrew.

13 MR. deLASKI: I do have a comment.
14 Mike, I thought I heard you say, and this is
15 reaching back a little bit -- correct me if
16 I'm wrong -- that the TSL chose for a Class B
17 TSL-3 was the entire levels were NPV negative.

18 MR. SCOTT: That's correct.

19 MR. deLASKI: And I would note
20 that that's true at the seven percent discount
21 rate, but not true at the three percent
22 discount rate.

1 MR. SCOTT: That's also correct.

2 MR. deLASKI: And that there's no
3 reason that one should be predisposed to
4 emphasize one or the other. I would argue
5 that the actual cost of capital the Department
6 chose for the purchase of the machine was
7 lower than seven percent so that the three
8 percent rate should be considered in the
9 Department's analysis and is required to be
10 considered by OMB.

11 I also would note that the mean
12 LCC is positive at TSL-4. So that not only is
13 those two economic indicators are at a
14 somewhat higher level and that your
15 presentation at the seven percent rate, you
16 know, there's no reason you have to start with
17 just that one rate.

18 MR. SCOTT: Just one point about
19 the LCC analysis. I'd have to look back at it
20 myself to be sure of this, but note that if
21 you're bringing LCC into the calculations by
22 TSL level, one thing the Department likes to

1 look at is the proportion of potential
2 purchasers of the machine who show a net gain
3 or show a net loss on an LCC basis.

4 Recall that I said we do a lot of
5 this on a distributed basis with probability
6 distributions, and so we do get some scatter.

7 MR. deLASKI: I'm looking at the
8 scatter right here, 80 percent, and that's it.

9 MR. SCOTT: Okay.

10 MR. deLASKI: So that to me points
11 to pretty strong evidence that TSL-4 is at a
12 higher level as being an appropriate level for
13 those based on basically all of the economic
14 criteria except this.

15 MR. BROOKMAN: You've anticipated
16 where we're going with the agenda. You can
17 see on Slide 31 that the Department of Energy
18 seeks comments specifically on proposed trial
19 standard level TSL-6 for Class A, TSL-3 for
20 Class B. So let's hear any additional
21 comments on those.

22 MR. LLENZA: I just wanted to make

1 a comment.

2 MR. BROOKMAN: Charles Llenza.

3 MR. LLENZA: Any of our numbers
4 that you may have some kind of disagreements
5 like in the trending, we would like your
6 comments specifically addressing, if we've
7 made some errors in your opinion, because what
8 we would like to do is look at them and if
9 we've made an error we would like to correct
10 them for the final.

11 MR. BROOKMAN: Right. Steve.

12 MR. COUSINS: Right, and that's on
13 our agenda for this afternoon, isn't it? I'm
14 looking at the discussion at 1:45 on the TSL
15 and I guess we can provide written comment on.

16 MR. BROOKMAN: Right, right. So
17 we're ahead of schedule.

18 (Laughter.)

19 MR. COUSINS: Are you saying we
20 can discuss that now?

21 MR. BROOKMAN: Yes.

22 MR. LLENZA: Yes, we can.

1 MR. BROOKMAN: Okay. Steve
2 Cousins, go ahead.

3 MR. COUSINS: Well, you know, I
4 heard the comment. I think Sam made it that
5 in large measure we refer to California energy
6 numbers and other publicly available numbers
7 to help establish the relationships in the
8 TSLs.

9 I would submit that those numbers
10 that you're looking at don't represent an
11 apples-to-apples comparison, particularly
12 because, well, one of the reasons you
13 elaborated on this morning, which was the
14 light level between an A and a B are
15 dramatically different.

16 Also, the test methods that's
17 used, ASHRAE 32.1, doesn't reflect an apple-
18 to-apple comparison between the types of
19 machines because the ASHRAE 32.1 does not
20 regulate or dictate the control of the
21 operating methods for all the powered elements
22 in the equipment. Well, lighting, for

1 example.

2 So you know, there are some drive-
3 around temperature, but not necessarily around
4 lighting. So what I'm cautioning us on, we
5 have to go and take a look at it, but my
6 caution is that some of the data that we
7 referred to, for example, may reflect a
8 machine with all of the powered elements
9 operating and the data for another machine in
10 the database may not represent it operating
11 with all the powered elements energized.

12 MR. BROOKMAN: Okay. Glen, you
13 had something?

14 MR. SELFRIDGE: Steve made a nicer
15 clarification to my comment.

16 MR. BROOKMAN: Okay, good.

17 MR. ROTH: Are you talking, Steve,
18 specifically about our ability to turn two of
19 the three lights off during the test method in
20 which you would have energy savings during
21 periods of non-usage where we only turn two
22 lights off and leave the top light illuminated

1 on the glass front on a Class A machine? Is
2 that what you mean where we have power savings
3 due to that as reflection of the way the test
4 method is done?

5 MR. COUSINS: I'm going well
6 beyond that. I'm also talking about idling
7 condenser motors, cycling the evaporator motor
8 at a certain period. So it's not just
9 lighting. It's also the other motors that are
10 involved.

11 MR. ROTH: But as long as it stays
12 within the ASHRAE 32.1 and keeping product at
13 36 degrees plus or minus one degree and all
14 the specifications, that's all available to be
15 able to do as long as it does not have the
16 ability to turn off. You can't have an
17 operator override the system and be able to
18 turn the system off. That's all part of
19 saving energy, isn't it?

20 I can't understand why --

21 MR. COUSINS: Because Nina will
22 jump up and tell you that a million control

1 schemes are patented. We have patents around
2 control schemes on operating fans, and
3 operating lights. So the availability of
4 being able to manipulate some of these things
5 to achieve energy benefits is not broadly
6 available to everyone.

7 Here's the base of what I'm
8 looking at here. Here's the base of what I
9 want to communicate, and I think Glen made
10 reference to this when we first started our
11 discussion. If you look at the refrigeration
12 element, if you look at the cooling element
13 between a Type A and a Type B, yeah,
14 intuitively and if you look at it carefully,
15 if you look at apples to apples comparison,
16 the heat load for an A cap is going to be
17 large or the cooling load for an A is going to
18 be larger than for a B.

19 Yet when you look at the
20 relationships in the TSLs, the expected
21 results is actually the reverse of that. I'm
22 not talking about the lighting. I'm just

1 talking about the cooling load itself.

2 Light levels are driven by the end
3 user, and the controls schemes that drive
4 those are driven in large measure by who owns
5 IP. So when I look at these numbers, they
6 don't make sense to me.

7 MR. BROOKMAN: Trent, go ahead.

8 MR. COUSINS: And I think the
9 reason why they don't make sense is because
10 the database is not based on apples-to-apples
11 comparisons.

12 MR. ROTH: When I first looked at
13 the numbers, we heard a lot of comments and
14 tried to understand are they correct or not?
15 I think they make very good sense, and I'm
16 trying to understand why, and I'll try to give
17 you a comparison of why I think they did. I'm
18 going to have to walk through some math
19 equations, but it's not too hard.

20 When you look at a stack, we're
21 going to use our 504 stack unit. It's our
22 closed front, Class B machine. We used to

1 have a formula based on ENERGY STAR where we
2 used can capacity which we changed to cubic
3 capacity. Again, the only variable that
4 changed and determines the threshold in which
5 one of these units needs to achieve is the
6 capacity of the machine. It used to be the
7 can capacity and now it's the cubic capacity.

8 But that is the variable today
9 that choose what threshold you have to meet.

10 What I tried to do is say, okay,
11 when is the comparison to a stack unit now
12 that we changed this in comparison to the
13 glass. When I look up 504 or our stack unit
14 with 504 cans, it has very high can
15 capacities. So the pressure will be pretty
16 high in the Tier 2 ENERGY STAR levels.

17 And when you look at a cubic
18 capacity comparison compared to the numbers
19 that we have in a glass front, it's half the
20 capacity. So our threshold number is
21 extremely lower because of that.

22 Now, I understand the argument

1 that we're only cooling one-third. We're not
2 really only cooling. We're keep one-third at
3 36 plus or minus one degree, but the upper
4 two-thirds of that cabinet is still pull heat
5 through induction or pulling that heat out of
6 there. So immediately focusing the air flow
7 on that one piece of it, but our number is
8 already cut substantially because --

9 MR. COUSINS: For your machines
10 because of the product capacity. I mean, his
11 machine may hold more capacity for the same
12 size cabinet.

13 MR. ROTH: But then I would expect
14 a relationship between the cubic capacity and
15 the can capacity to slightly change. You take
16 a larger machine. I mean, what I was trying
17 to get at, when you use the formula and you
18 use cubic capacity rather than the can
19 capacity as the baseline of the formula,
20 because we cut it in half with stack units and
21 you're saying the argument is we're only
22 cooling one-third which should be easier to

1 achieve the energy levels, that's already
2 being done in the formula strictly because the
3 capacity is cut down.

4 Our cubic capacity in the 504 is
5 about 17 cubic feet, where our glass front is
6 about almost 35 cubic feet. So just
7 inherently the way the formula is written, it
8 cuts that threshold floor down. So that's why
9 the energy levels that we think are fair, and
10 you add the lighting back in on top of that
11 that we need to do from the sign face. We
12 think the numbers are correct.

13 MR. BROOKMAN: Glen, please.

14 MR. SELFRIDGE: I want to address
15 this to Trent. I believe, having seen both
16 cabinets and tested both and worked with both
17 companies --

18 (Laughter.)

19 MR. SELFRIDGE: -- Twenty-seven
20 years, 20-something years, that you have
21 perhaps misinterpreted the requirement for the
22 calculation of refrigerated volume that was

1 accepted by this entire group at the first
2 meeting, because your volumes are significant
3 higher than that.

4 As a matter of fact, I don't think
5 the study was provided by you particularly,
6 but within the CSA 804 new review over the
7 last couple of years, your people supplied
8 test data anonymously with the volumes, and it
9 worked out to formula that was accepted by the
10 Canadians at this point under the new 804
11 standard that clearly show what everybody else
12 happens to know to be the truth that the Type
13 B machine is inherently going to use less
14 energy.

15 MR. ROTH: I'll address that.

16 MR. COUSINS: Based on the data
17 I've seen, yes.

18 MR. SELFRIDGE: Huh?

19 MR. COUSINS: Based on the data
20 that we've seen.

21 MR. BROOKMAN: Steve is talking
22 about the data, and now Trent, back to you.

1 MR. ROTH: I mean, we don't see
2 that. Our glass fronts are significantly more
3 efficient than our stack units. We've posted
4 the EPA on large glass front 3.95 kilowatts an
5 hour.

6 MR. COUSINS: Yeah, I don't deny
7 that. They are more efficient, but that
8 doesn't mean they use less energy because of
9 the required cooling load.

10 MR. ROTH: Our glass front holds
11 405 cans. Our stack unit holds 504. Our
12 glass front is significantly, I mean a
13 kilowatt and a half less energy.

14 MR. COUSINS: But what I'm saying
15 is for that same volumetric capacity there are
16 machines that will hold more packages than
17 your machine will hold, and there's a larger
18 heat load as a result.

19 MR. BROOKMAN: But isn't that true
20 with -- for the record I want to clarify.
21 Trent, Steve, Trent, Steve, now back to Glen.
22 Go ahead.

1 MR. SELFRIDGE: One last comment
2 and I think I can move on. I believe that the
3 numbers that you have published with EPA
4 include the ASHRAE test number where you're
5 using the automatic management system.

6 MR. ROTH: Trent.

7 That is correct. What we've done
8 is we have three lights in our glass front.
9 We have a top light and we have two right-hand
10 lights. We turn those two lights off during
11 the test method because it is factor set that
12 if there's a period of non-usage, those lights
13 will go off.

14 The lighting though, the majority
15 of the glass fronts in the marketplace today
16 are ours. We're going back in the period.
17 They only had one light in there. We added
18 two lights when we came up with our new
19 design. So we didn't decrease the lighting to
20 what normally was in there. We just increased
21 the lights in our current machine today to
22 allow similar test methods as what we do with

1 computer screens today. When there's non-
2 usage, it will turn off.

3 So then those are included on
4 there, but the lighting is similar to what we
5 had in lighting a number of years ago in all
6 of the glass fronts that we had.

7 MR. BROOKMAN: Glen.

8 MR. ROTH: But it does account
9 towards others who are able to do that.

10 MR. SELFRIDGE: One last comment
11 on that clarification. I have no disagreement
12 with what Dixie is doing that's allowed on the
13 32 months period. But in the question of
14 agreeing or disagreeing, in fact, we may have
15 to go there.

16 But the point is that you take our
17 Type A machine, pull the lights out of it
18 entirely and it consumes three and a half
19 kilowatt hours a day. And I think we got it
20 rated as a 5-6 or something. So the
21 differences in the lighting and all of this is
22 gushing, hits around the assumptions that

1 might have gone into these volume calculations
2 on the type A machine being skewed. Okay?

3 MR. COUSINS: Yeah, right.

4 MR. SELFRIDGE: Because they heard
5 me.

6 MR. COUSINS: Well, yeah, that's
7 what I said. Steve Cousins.

8 That's where we don't really have
9 an apples-to-apples comparison with the
10 numbers that have been used to develop these
11 relationships because there's a more focused,
12 more attention and more development on the
13 Type A machines, and the operational schemes
14 around it. You know, it makes me question
15 what we have here, and I think what we would
16 have to do, at least what I would have to do
17 in providing comments before the written
18 period is over which is to point where I think
19 are the specific problems in the data set.

20 MR. BROOKMAN: In the
21 comparability?

22 MR. COUSINS: Yeah, and how we

1 should address that.

2 MR. BROOKMAN: Okay. Trent.

3 MR. ROTH: This is Trent.

4 I just have one question. It
5 might be directed toward Navigant Consulting
6 or some DOE, but I don't look at these
7 thresholds of where our equipment is today. I
8 mean, I know where we are today. I know where
9 we stand because you know we've done those
10 depositions, but isn't the goal for us not to
11 -- to include all of the equipment where we
12 are today, accept that standard and let's move
13 forward?

14 I think we've wasted three years
15 of trying to get where we're at today. I
16 mean, if we're just going to say that we need
17 to do this threshold and everybody agrees we
18 need it, everybody is happy, it all falls in
19 with the same correct number today, then I
20 think we wasted three years. I mean, where
21 are we going to be three years from now? We
22 haven't looked at a lot of things to drive

1 energy reduction down. We really haven't done
2 anything seeing if you've got stacks at all or
3 Class B. We've done very little for Class A
4 so far.

5 It all comes back down to cost
6 later on.

7 PARTICIPANT: Short equation.

8 MR. ROTH: And how much do you
9 need to add to get it down there?

10 But I don't think we're looking at
11 everything it needs today. I think it's all
12 in the baseline, but are we really looking at
13 where we're going to be three years from now?

14 That's the question I have. What are these
15 regulations based on?

16 MR. BROOKMAN: Do we want to --
17 Charles?

18 MR. LLENZA: This is Charles
19 Llenza, Department of Energy.

20 The Department has identified a
21 path to get there. It does not mean that the
22 industry does not find other paths to get

1 there, and so what the Department is saying is
2 that we see a path to get there and basically
3 the industry can either use that path or
4 provide an alternative path.

5 What Trent Roth is saying is true.

6 The industry can then look at other means of
7 getting there. We're just saying that this is
8 one method or one avenue to get there based on
9 what we see today.

10 MR. BROOKMAN: Bob.

11 MR. MCGARRAH: With all due
12 respect, I think the industry is just there.
13 We're proposing over this past three or four
14 years, the standard that's being proposed I'm
15 hearing, the industry is either there or maybe
16 a little beyond it, and we're not going to
17 propose or enact this for three more years,
18 two years, 2012.

19 So the industry is --

20 PARTICIPANT: Let's for argument
21 purposes say that you're there. Are you
22 there, Trent?

1 MR. ROTH: Class A equipment,
2 ASHRAE 32.1, we see the stack.

3 MR. McGARRAH: Okay. So you're --

4 PARTICIPANT: The stack in the
5 Class B equipment?

6 MR. ROTH: No, we don't. We have
7 to use work in order to achieve the standard,
8 achieve the Class B standard, and how much
9 work would we have to do? We haven't even
10 worked on that yet. So I don't know the
11 answer to that question in Class B. We
12 achieve it today on Class A.

13 MR. McGARRAH: That's what I was
14 trying to relate to ENERGY STAR Tier 2,
15 looking at ENERGY STAR Tier 2 for a long time,
16 and have been making improvements on ENERGY
17 STAR Tier 2 right up to today, and two years
18 from now the standard that I'm hearing is
19 being proposed, which is 20 to 31 percent
20 better than ENERGY STAR Tier 2, I believe some
21 of these folks may already be there.

22 So the standard two years hence

1 really doesn't meet the mandate of the Energy
2 Policy and Conservation Act, which is to --
3 shall we all say it together? -- achieve
4 significant energy savings. If we're there
5 now, the proposal that we have is wide.

6 MR. BROOKMAN: Trent, you okay?
7 Okay.

8 So any other comments specifically
9 surrounding trial standard Level 6 for Class A
10 and trial Standard Level 3 for Class B?

11 So I think we have covered that
12 much. Let's move on with the presentation,
13 LCC subgroup analysis.

14 MR. SCOTT: Okay. Well, the
15 purpose of the subgroup analysis is to
16 evaluate the economic impacts of standards on
17 customer subgroups. This is people with the
18 -- they're returning the ?? and paying the
19 utility bills. So the impact on customer
20 subgroups who may be disproportionately
21 compared with the general user population,
22 actually the original concern for this comes

1 out of more the residential side of the house
2 where the concerns for people like low income
3 purchasers of household equipment. However,
4 we do it on the commercial side as well.

5 The DOE identified potentially
6 disadvantaged businesses and we exemplified
7 those by independent manufacturing sites that
8 own BVMs at their sites. So think about a
9 factory floor somewhere where somebody has
10 actually bought the vending machines. They
11 own them and they operate them.

12 These owners would experience the
13 highest financing costs of any of the groups
14 of potential purchasers of the machines that
15 we were able to locate, and they also, because
16 they pay a manufacturing facility, they're
17 going to be typically paying an industrial
18 energy price rather than a commercial one.
19 They also have the lowest energy prices and
20 therefore the lowest savings with the same
21 energy savings.

22 And we used our basic LCC

1 spreadsheet model just for that group of
2 people to determine the impact on that
3 customer subgroup, sort of the worst case
4 group, and we did find that LCC savings and
5 the simple payback period was -- well, the LCC
6 savings were lower and the payback periods
7 longer for that identified customer subgroup.

8 However, we didn't feel that they
9 were disproportionately impacted by the
10 standard. It was not as good, but it wasn't
11 radically different. That analysis is found
12 in Chapter 12 of the TSD, and there's also
13 some discussion of it in the NOPR.

14 MS. TARLEY: I have a question.
15 For the benefit of the group, could you state
16 what is approximate cost of energy to run a
17 machine per day or per year? Do you know?

18 MR. SCOTT: I do not.

19 MR. BROOKMAN: Gentlemen, the
20 total amount of energy to run a vending
21 machine per day or year?

22 MS. TARLEY: Cost of the energy.

1 I happen to have the numbers.

2 (Laughter.)

3 MR. COUSINS: The cost you mean?

4 MS. TARLEY: Yes, it's the cost.

5 On the evidence the vending
6 machine costs somewhere between 58 cents to 94
7 cents per day. That's the cost of diving the
8 machine which per year translates to somewhere
9 between \$200 to \$380 per year.

10 MR. SCOTT: Okay. That sounds
11 about right to us. You're getting nods from
12 over there at Navigant's table.

13 MS. TARLEY: Just so we can
14 understand what's involved.

15 MR. BROOKMAN: Okay. Thank you.
16 Have you finished?

17 MR. SCOTT: Yeah, I'm finished
18 with that one.

19 MR. BROOKMAN: So comments on LCC
20 subgroup analysis? And thanks for that date.

21 Any additional thoughts on LCC?

22 It's now 1210. Manufacture impact

1 analysis followed by these other kinds of
2 analyses. Do you want to break for lunch now
3 because I think we have -- well, yeah? Do you
4 want to break for lunch now?

5 I think people are starting to get
6 hungry. Okay. So now it's 12:10. We're
7 going to pause and take an hour for lunch.
8 Please wear your badges in the building.

9 A whole bunch of us are going to
10 head downstairs and go to the cafeteria which
11 is across the street underneath, get on the
12 ground floor and go down a long corridor and
13 then back up to the floors above.

14 If you try and go out of the
15 building off campus, you may have a hard time
16 getting back here in time. So I'd like very
17 much to encourage people to see the cafeteria.

18 It's newly renovated. It's looking pretty
19 good.

20 PARTICIPANT: Is the food any
21 better?

22 MR. BROOKMAN: I don't know if the

1 food is any better or not, but we'll find out,
2 won't we?

3 So we will resume at 1:10.

4 Thank you.

5 (Whereupon, at 12:10 p.m., the
6 meeting was recessed for lunch, to reconvene
7 at 1:10 p.m.)

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AFTERNOON SESSION

(1:19 p.m.)

MR. BROOKMAN: Welcome back. So what's the verdict? Do you know the food has improved any? The cafeteria looks better. What do you think? Maybe the look does it all by itself.

(Laughter and simultaneous conversation.)

MR. BROOKMAN: Okay. So let the record reflect that people are generally impressed by the new cafeteria, but we're still questioning, we're still evaluating the food.

We're moving on ahead where we left off with the slides in your packet, and we are now by my count on Slide 33, manufacturing impact analysis

MR. KINGMAN: I'm Jeff Kingman from Navigant Consulting, and this is a follow-up to the ANOPR presentation where we presented some of the initial concerns of

1 manufacturers.

2 For the NOPR we continue to do
3 that but also follow through with a full cash
4 flow analysis to quantify the impacts on the
5 industry.

6 The main point of the
7 manufacturing impact analysis, or MIA, is to
8 assess the impacts of energy conservation
9 standards on the BVM manufacturers. For this
10 DOE relies on a number of sources of
11 information.

12 We rely on information provided
13 from manufacturers and other stakeholders.
14 Another part of the analysis is the other
15 analyses that were completed previously like
16 the engineering and the MIA.

17 Another point of the MIA is just
18 to estimate the impacts on manufacturer's
19 subgroups. This is separate from the LCC
20 subgroups. The subgroup we analyzed for this
21 NOPR is small manufacturers, and in order to
22 determine if a manufacturer is a small

1 business we used the SBA definition, which
2 included parent companies and subsidiaries.
3 For BVM they have to have less than 500 total
4 employees.

5 During the MIA process, DOE
6 attempts to or the contractor attempts to
7 interview any manufacturer that's interested
8 in speaking. That includes small businesses
9 if they are interested as well.

10 And the third point of the MIA is
11 to examine the impact of cumulative regulatory
12 burden on the industry. For this DOE looks at
13 federal regulations and other regulations that
14 could potentially affect the manufacturers.

15 In order to conduct the MIA DOE
16 uses all available information to develop
17 manufacturer's financial parameters and the
18 costs of comply with the standard. These
19 inputs are then incorporated into the
20 government regulatory impact model, or GRIM.

21 The GRIM outputs cash flows for
22 the analysis period and calculates the impacts

1 on the industry, which is called the industry
2 net present value by assembling the discounted
3 cash flows over the period. This is done for
4 the base case, which is absent standards, and
5 for standards cases at each of the trial
6 standard levels.

7 And the differences for each TSL
8 between the base case and standards case,
9 INPV, is a quantitative representation of the
10 manufacturer impacts due to standards.

11 Additionally, the interview
12 process is used to refine inputs the GRIM and
13 to develop other subanalysis, such as the
14 subgroup analysis, cumulative regulatory
15 burden, and the impacts on employment.

16 This slide is just an illustration
17 of the phases that DOE goes through in order
18 to conduct the MIA. Phase 1 is the part that
19 was conducted during the ANOPR, which is when
20 DOE uses publicly available information, such
21 as SEC 10-K reports and annual reports for
22 manufacturers to complete a market and

1 industry profile.

2 Phase 2 and 3 are what we
3 conducted during the NOPR. The first big part
4 is developing a strawman GRIM, which is using
5 the previously available information that's
6 available publicly and also develop an
7 interview guide.

8 During Phase 3 is when DOE's
9 contractor actually conducts the interviews to
10 develop the other subanalyses, such as the
11 small business impacts and the cumulative
12 regulatory burden. And it's also used to
13 refine some of the GRIM inputs.

14 And for the MIA presented in the
15 NOPR, we used two different scenarios in order
16 to bound the impacts on the industry. To
17 assess the lower end of the range, we
18 considered a preservation of gross margin
19 percent scenario, and that, a single uniform
20 gross margin percentage mark-up is applied
21 across all efficiency levels and equipment
22 classes.

1 In this scenario as product costs
2 increase with efficiency, the scenario implies
3 that the absolute dollar margin will also
4 increase, and to assess the higher end of the
5 range of potential impacts, DOE considered the
6 preservation of operating profit scenario, and
7 in this scenario DOE models manufacturer
8 concerns about the over capacity of the
9 industry and the inability to set some of the
10 prices they charge our customers.

11 In this scenario, manufacturers
12 spend the necessary investments required to
13 convert the facilities to produce the
14 standards of required equipment. Despite this
15 effort operating profit does not change from
16 the base case and decreases as a percentage of
17 revenues.

18 The equipment and capital
19 conversion costs necessary to reach each TSL
20 are included in both mark-up scenarios.

21 And at the beginning of the
22 presentation, DOE requested comment on a

1 number of issues that related to the MIA, and
2 I think we can go back now and revisit some of
3 those.

4 Should I go back in the slides?

5 MR. BROOKMAN: Yes, that will be
6 fine.

7 MR. KINGMAN: The first issue was
8 just any comments on the impact of industry
9 net present value at the proposed standard
10 levels.

11 The next one is what impact TSL-6
12 could have interested parties, including small
13 businesses. Another one was whether or not
14 the proposed standards risk any industry
15 consolidation.

16 And a final one was how small
17 business manufacturers will be affected due to
18 new energy conservation standards.

19 MR. BROOKMAN: So there you can
20 see a series of questions. We touched on some
21 of these at least, I think. So maybe we could
22 start with the first block there, industry

1 NPV, and comment on that.

2 Please, Nina.

3 MS. TARLEY: Nina Tarley, Pepsi Co.

4 Yes, the comment I want to make is
5 just a little bit of history of the vending
6 machine when it comes to a logical assumption.

7 Before 2004, vending machines were energy
8 hogs because nobody paid attention to energy.

9 As soon as ENERGY STAR started reviews of
10 Tier 1, there was a humongous effort and not
11 to say that Pepsi Co. made it mandatory that
12 all vending machines meet the Tier 1 ENERGY
13 STAR, and they all complied. The result if I
14 recall correctly, somewhere around 22, 23
15 percent energy.

16 Then in the middle of 2007 the
17 ENERGY STAR introduced Tier 2, and again Pepsi
18 Co. led the industry by mandating that all of
19 our vending machines meet the Tier 2, and that
20 was tough. Getting to Tier 1 was relatively
21 easy. Getting from Tier 1 to Tier 2 was a
22 massive effort, cost a lot of money and

1 energy, no pun intended.

2 But as a result, another 28
3 percent reduction in energy consumption was
4 achieved.

5 MS. PINTO: Excuse me. An
6 additional 28?

7 MS. TARLEY: That's correct.
8 That's correct. That was a major, major
9 effort between the Tier 1 to Tier 2. So
10 overall if you compare the current model
11 versus 2003-2004, we saved 51 percent energy.
12 Pepsi Co. did.

13 So I just wanted to give this
14 background so everybody understands that now
15 that people are talking another 20, well,
16 let's say, anywhere between ten to 30 percent
17 reduction in energy consumption, we're talking
18 about probably cost and effort.

19 And also not quite related, but
20 some of you might have heard there is another
21 nail in the coffin of the vending industry.
22 Regulation is being discussed as we speak

1 about mandating nutrition labels on the
2 vending machines that will specify the caloric
3 effect of every single item in the vending
4 machine. This is being discussed and we
5 expect to -- Mike might have some more updated
6 information, but it is going, I believe, to
7 Congress and then to Senate for approval,
8 which every vending machine will require to
9 have a label stating --

10 MR. BROOKMAN: Not on the bottle
11 itself, but on the actual machine?

12 MS. TARLEY: Correct, on the
13 outside of the vending machine. That is
14 correct, yes. So anyway.

15 MR. BROOKMAN: Okay. So that's
16 interesting. Thanks for that history.
17 Appreciate that.

18 So then you can see the specific
19 questions that DOE would like you to comment
20 on. Maybe we can start with why the private
21 market has not been able to capture the energy
22 benefits proposed.

1 Nina has responded to that, but
2 that's specifically in TSL-6, and whether and
3 to what extent parties estimate they'll be
4 able to transfer cost of implementing TL-6 on
5 to consumers. Maybe we could start with that
6 one and do both of those two.

7 What do you thing? Bob?

8 MR. MCGARRAH: I'll take a shot at
9 it. I don't think you're going to be able to
10 do it because the energy savings goes to the
11 person that pays the electric bill. The
12 utility programs that run programs for energy
13 saving equipment, the incentive dollars goes
14 to the person who pays the energy bill. The
15 manufacturers, machine owners, the Cokes and
16 Pepsis of the world get zero share of that
17 savings benefit, which is the reason the
18 machines have been energy hogs for so long,
19 because there was nothing to benefit even the
20 manufacturer or the machine owner. So who
21 cares what the gas mileage is if I'm not
22 buying the gas?

1 So until we can get something
2 going there -- I shouldn't say "until" -- but
3 when we get something going there, then these
4 very stark, scary, under a million vending
5 machines in the marketplace in 12 years, maybe
6 that won't happen, but if there's a financial
7 incentive to the machine owner and the machine
8 manufacturer to get an energy efficient
9 machine, and I don't say get the benefit, but
10 share the benefit so that there's a mutual
11 benefit to the person that pays the electric
12 bill obviously and a benefit to the folks that
13 run and build the machines.

14 MR. BROOKMAN: Steve.

15 MR. COUSINS: For a long time the
16 cost increases to the system have not been
17 transferred on to the consumer. Material cost
18 increases, cost increases to the commodities
19 or the products that are sold to the
20 commodities.

21 I guess the point I'm making is
22 this. Any up charge or any increased cost

1 because of more energy efficient technologies
2 that are put into the machine, that cost will
3 not be transferred over.

4 Historically the industry just
5 doesn't -- we haven't had the means to
6 actually be able to transfer cost or move cost
7 downstream.

8 MR. BROOKMAN: You change your
9 calculation about how many bottles or how much
10 product needs to be sold and keep it
11 profitable.

12 MR. COUSINS: Essentially, yes.
13 That's what's happening, and that's one of the
14 things that's driving less and less machines
15 in the marketplace.

16 MR. BROOKMAN: Okay. Yes, Trent.

17 MR. ROTH: Trent Roth, Dixie-
18 Narco.

19 I'm just trying to understand
20 this. You're asking the added cost it will
21 take us to get to TL-6, how would that be
22 passed on to the --

1 MR. KINGMAN: Yeah, I think this
2 question is asking from starting from the
3 manufacturer down the distribution chain how
4 those costs will be passed along.

5 MR. ROTH: Well, for A model, a
6 Class A, we didn't have any additional costs
7 in getting to that from where we were, from
8 the last one. We didn't pass on any costs.
9 Whatever costs there were, and I'm not sure
10 what that was, we did not pass any costs on in
11 Class A. We kept it at the same price to our
12 customers.

13 MR. COUSINS: So there's no cost
14 difference between Tier 1 and Tier 2 Class A.

15 MR. ROTH: From a Tier 2 to go
16 into where the NOPR is from us? No.

17 PARTICIPANT: Somebody get that.

18 MR. ROTH: But that would mean how
19 much added cost? I mean there wasn't a lot
20 that we had to do to get to that piece. I
21 mean, that's saying Tier 1 to Tier 2, yeah, we
22 had to make changes.

1 MS. TARLEY: Yeah, that was
2 Steve's question.

3 MR. ROTH: Sorry, yeah.

4 MR. SELFRIDGE: Actually Tier 0 to
5 Tier 1 was fairly substantial when you
6 consider the up charges for ECM, an operator
7 paying for special compressors and all the
8 other things that went into the magnetic
9 ballast. The accelerator cost, it cost us a
10 lot.

11 MR. ROTH: It did.

12 MR. BROOKMAN: From Tier 1 to Tier
13 2, and so, Glen, thank you that. I just
14 wanted to acknowledge the last comment was
15 from Glen.

16 MR. ROTH: It did cost us more.
17 This is Trent. It did cost us. I'm just
18 trying to understand the question.

19 MR. HORNQUIST: The question on
20 the table is -- this is Edwin Hornquist -- is
21 at the TSL level. It's not Tier 1, Tier 2.
22 It's the incremental cost from TSL-1 through

1 6.

2 And you're saying that there is no
3 cost?

4 MR. ROTH: No, I corrected myself.

5 There is a cost because we did have to
6 implement ECM. I was trying to understand the
7 question. We did have to incur costs trying
8 to get to that level.

9 MR. BROOKMAN: In this case TSL-6
10 is ENERGY STAR 2, Tier 2?

11 MR. KINGMAN: No, it's the
12 baseline.

13 MR. BROOKMAN: It's the baseline
14 Sorry.

15 MR. LLENZA: Charles Llenza. Tier
16 1 is the baseline. Sorry.

17 MR. BROOKMAN: Okay. We want to
18 move to the question you see there at the top
19 of the screen.

20 MS. PINTO: Excuse me, Doug. This
21 is Francine Pinto.

22 MR. BROOKMAN: Go ahead.

1 MS. PINTO: I want to go back to
2 this other point about the impacts on
3 manufacturers. I didn't feel like I got a
4 clear answer that I can understand.

5 If the TSLs that are proposed, the
6 proposals, were to become the final rule, what
7 is the impact on manufacturers? I just want
8 to get that sense from you all. This will be
9 finalized the way it is proposed. How does it
10 impact you?

11 MR. ROTH: In three years?

12 MS. PINTO: In the three years,
13 right.

14 MR. BROOKMAN: Go ahead.

15 MR. ROTH: Trent from Dixie-Narco.

16 It goes for both classes. I'm not
17 sure what we have to do to get to Class B
18 because we haven't tested the equipment, and
19 I'm not sure what we have to do. I don't know
20 an answer to that at this point.

21 MS. PINTO: Okay.

22 MR. ROTH: Class A particularly

1 for us, nothing. We're there.

2 MS. PINTO: Okay.

3 MR. COUSINS: Steve Cousins here,
4 Coca-Cola.

5 With regard to what our system
6 does and the impact that that has on these
7 manufacturers is closely connected to cost
8 because historically our available capital and
9 the capital investment has either been fixed
10 or is shrinking.

11 So even though you can achieve
12 these numbers technologically with A, for
13 example, you know you can hit the target, the
14 cost implications may have some impact on the
15 volume that we purchase.

16 MR. BROOKMAN: Trent.

17 MR. ROTH: The only question I'd
18 say is if you're buying them today I don't
19 know where the change is taking place. What
20 you currently are buying today are the ones
21 that we pushed down

22 MR. COUSINS: So you're assuring

1 me it's not going to be any cost increases
2 over the next three years?

3 MR. ROTH: Not at all.

4 MR. COUSINS: All right. Write
5 that down for me.

6 MR. ROTH: Not at all am I
7 assuring that, but it has nothing to do with
8 what we've done. The machine, we made a
9 transition this year and took it to this new
10 level. We did not have a price increase this
11 year as a result.

12 MR. BROOKMAN: Glen.

13 MR. SELFRIDGE: Yeah. Assuming as
14 I say Dixie-Narco has done this basically the
15 way they said they did here on the energy
16 management system, it's not an expensive add
17 to the existing machine, then we can pass it
18 on at substantially no cost provided there was
19 no intellectual property hanging back into the
20 background with that petition, but what that
21 level does do to you, it leaves you with
22 basically no lighting machine, no nothing else

1 to play with as you move on down the road five
2 years from now, ten years from now as you have
3 with any other one.

4 You are actually taking functional
5 equipment and you are disclosing it. Okay?
6 So to get to the new machine, there is going
7 to be some cost associated with that one way
8 or the other, perhaps not greatly huge at
9 least in our case. But unless we would adopt
10 the energy management system which we can do
11 if there's no intellectual property; we could
12 get to that Level 6.

13 But it's very misleading because
14 you adopt the ENERGY STAR? It takes out a
15 substantial component and nobody in the world
16 knows about it, except this little room.

17 MR. BROOKMAN: Francine.

18 MS. PINTO: When you say it takes
19 out a substantial component -- Francine Pinto
20 -- what does that mean?

21 MR. SELFRIDGE: What that means is
22 the machines have lights and if you walk up to

1 a machine, this is the mass run Type A
2 machine, and the lights are off when you can't
3 see the project.

4 Number two, you believe the
5 machine is not functioning. The beverage
6 companies lose their visibility if you want a
7 little fancy thing.

8 MS. PINTO: So are you saying --
9 this is Francine Pinto -- that in order to get
10 to the proposed level you have to eliminate
11 all the lighting?

12 MR. SELFRIDGE: You have to
13 eliminate the lighting for the period of the
14 ASHRAE test.

15 MR. BROOKMAN: That is the
16 manufacturer wanting to follow on.

17 Trent, go ahead.

18 MR. ROTH: I'm just trying to
19 clarify. Currently today in our machine we
20 have three lights in our machine, fluorescent
21 lights. During a period it can be down one
22 hour with a period of inactivity. Two to

1 three lights shut off. The top light remains
2 illuminated.

3 The top light is the same lighting
4 we've had on glass fronts prior to what came
5 out with the BevMax 2 back in 2004. On every
6 other glass front we ever produced out there,
7 and I can say there's more of those out there
8 than every other glass front made by every
9 other manufacturer combined in the marketplace
10 today with just one light at the top, it did
11 not inhibit sale. It did not --

12 MR. SELFRIDGE: And the door
13 light?

14 MR. ROTH: The doorlight, that was
15 inside. That didn't illuminate anything.
16 That was just for --

17 MR. SELFRIDGE: Merchandising.

18 MR. ROTH: Yeah, for
19 merchandising, but it did not have anything to
20 do with lighting the interior of the cabinet.

21 It's the same lighting we have today when we
22 go down to two lights.

1 So we made a very clear effort to
2 make sure that when we turn the two lights off
3 the consumer would not be turned away from
4 that product thinking the product was on order
5 because that wouldn't do us any good as well.

6 So, yes, we do two, three lights
7 on, but I need to be very clear that we did
8 that. We made a conscious effort to split the
9 ballast to be able to make that happen, but
10 that was one way we could do to insure that
11 during periods such as, in fact, in schools
12 when the machine is not being used that we're
13 saving energy, and that is part of what the
14 ASHRAE does allow.

15 That is what we do.

16 MR. COUSINS: And there's nothing
17 wrong with that.

18 MS. PINTO: No, I'm just trying to
19 understand.

20 MR. COUSINS: Yes. The ASHRAE
21 methodology does allow that, but the ASHRAE,
22 as a result, the ASHRAE methodology does not

1 reflect the real life use of the machine.
2 Because if two of the three lights are off in
3 actual use, that means that the machine is
4 really not being used. If the machine is not
5 being used, we're taking the machine out of
6 trade.

7 In actual use in accounts where
8 we're making money, those lights are going to
9 be fully operational, and not just the lights;
10 any other powered element whether it be, you
11 know, the evaporator fan, for example.
12 Everything is going to be fully operational.

13 So the way the ASHRAE methodology
14 is right now is that if you have the correct
15 control scheme, it may make the machine appear
16 to be efficient. Whereas in actual use it's
17 not really as efficient.

18 MR. BROOKMAN: So in school
19 applications, in warehouses where they're only
20 doing one shift, it's eight or ten hours or
21 something like that, and then the machine is
22 not in active use.

1 MR. COUSINS: And is a minority of
2 our accounts.

3 MR. BROOKMAN: I see.

4 MR. COUSINS: But my point is that
5 there's nothing wrong with what you guys have
6 done, but the ? is not making it because that
7 doesn't reflect how the machine is being used,
8 but ASHRAE testing will allow that at this
9 time.

10 MR. BROOKMAN: Okay. So,
11 Francine, does that answer your question?

12 MS. PINTO: Just to reflect back
13 what I'm hearing, and correct me if I'm wrong,
14 so there's effort involved in meeting these
15 levels. I know you've already met them, but
16 I'm not hearing any overwhelming major
17 problem. Am I getting that right or not?

18 MR. HORNQUIST: I have a question.

19 MR. BROOKMAN: Let's let Glen
20 respond first.

21 MR. SELFRIDGE: I just want to say
22 one. As I've said, and I'll just repeat one

1 more time, Trent is right and they are right.

2 I said this morning if we have to meet that
3 level we can do exactly what Dixie is doing,
4 and it has not been discussed today. What I
5 want to know from all of this is if the
6 legislation goes forward, if we can do that
7 and Dixie doesn't have some kind of pending
8 operations or whatever that would suddenly
9 come up to doing a similar thing. Because we
10 have a need and now we have an answer. Our
11 lights are on all the time. But this is a
12 fairly sticky one going with control lights on
13 and paying for the refrigeration.

14 MR. BROOKMAN: Let me ask this. I
15 may be stepping beyond the scope of this. Is
16 Dixie-Narco able to say where there is a
17 patent pending? That's relevant to this,
18 isn't it?

19 MR. ROTH: If we turn the lights
20 off, I don't know the answer.

21 MR. BROOKMAN: Okay.

22 MS. PINTO: So it is important.

1 MR. BROOKMAN: That's why I asked
2 it, yeah. Let me go to these two, Andy, just
3 for a second. Go ahead, Steve.

4 MR. COUSINS: Yeah. The only
5 point I wanted to elaborate on, and Glen
6 touched upon it already. I was saying earlier
7 and challenging Trent. If achieving the TSLs
8 is done by going to more costlier energy
9 efficient component versus non-cost involved
10 control schemes, that that's -- let me back
11 up.

12 I'm not sure how you can hit the
13 targets. Okay? I don't know if you can hit
14 it with more efficient components or if you
15 need to do something beyond that, but the way
16 my system behaves is that the equipment is
17 more expensive. We just buy less of it, and
18 if the only way we can hit these target is by
19 more efficient components which are costlier,
20 then the net result is we'll probably buy less
21 equipment.

22 MR. BROOKMAN: Right. You're got

1 pretty much a fixed budget or something,
2 capital expenditure.

3 Edwin, I dropped you out. Do you
4 still?

5 MR. HORNQUIST: Well, yeah, it was
6 just a comment and a question. I'm wondering
7 if what you're saying, Steve, is that a very
8 small portion of your equipment as operated is
9 the market that you serve, would benefit from
10 this control scheme.

11 MR. COUSINS: No, I wouldn't put
12 it that way because if you look at the
13 equipment that we have, we use sophisticated
14 control schemes in the majority of our cold
15 drink equipment, but we look at guaranteed
16 energy savings versus potential or candidate
17 energy savings.

18 If there's an elaborate control
19 scheme with the equipment, that doesn't
20 guarantee. If we say, okay, we will become 30
21 percent more efficient by using this elaborate
22 control scheme, that's not a guaranteed 30

1 percent energy savings in the trade, and so
2 there's no guaranteed savings on the control
3 algorithm that may not reflect real world.

4 MR. HORNQUIST: So in this case
5 you have a scheme that is being used using the
6 test method, the ASHRAE test method, that
7 allows for this lighting to be taken down to
8 approximately a third that would otherwise be
9 used.

10 MR. COUSINS: Well, what we find
11 is that we will with that kind of arrangement,
12 we will have -- we definitely will have
13 additional energy savings with that kind of
14 arrangement, but it may not be the 30 percent
15 that an ASHRAE test or it may not be the same
16 extent that the ASHRAE test demonstrated.
17 Chances are it's going to be something less.

18 MR. BROOKMAN: In the actual
19 application.

20 MR. COUSINS: Right.

21 MR. BROOKMAN: Andrew, you're next
22 in the queue.

1 MR. deLASKI: Yeah, I had a couple
2 of comments. I think we've heard from the
3 Department in the NOPR and also in the
4 comments today that we're stuck with
5 ASHRAE/ANSI for the moment. You know, final
6 will come out August 8th, but you know, so
7 we're kind of stuck with the method for the
8 moment.

9 And in my opening comments
10 remarked that why is there a need to reopen
11 that method and to make it reflect real world
12 conditions. I think we're certainly in favor
13 of that, and there are other technologies,
14 additional control to help reflect it
15 accurately with technology benefits.

16 I had another thought but I've
17 lost it.

18 MR. BROOKMAN: Okay. We'll come
19 back to you.

20 Bob.

21 MR. MCGARRAH: To answer
22 Francine's question about patents -- Bob

1 McGarrah -- to answer that question, there are
2 patented products out there today in the
3 hundreds of thousand numbers for after market
4 equipment, for pieces of equipment that are in
5 the marketplace today. Wal-Mart, for example,
6 has a lot of actually the Pepsi machines with
7 an after market product that's saving 15 to 30
8 percent.

9 Austin Energy, the poster child
10 for energy efficiency, has purchased tens of
11 thousands of these after market products for
12 both vending machines and cooler for energy
13 savings up to 46 percent, and that's patented
14 product, but it's available to everyone.

15 You have the situation here, you
16 know, if Coke has a patent they're not going
17 to give it to Pepsi and vice versa because
18 that's a competitive marketplace advantage.

19 But there are companies out there
20 today that have patented products that are
21 available to everybody. The patent just says
22 you can't make it in your garage and sell it

1 to the same people I'm selling it to.

2 It's available and these products
3 are well under 100 per unit.

4 MR. BROOKMAN: We don't know the
5 full answer to the question is what I'm
6 hearing.

7 MR. McGARRAH: So there are
8 patents --

9 MR. BROOKMAN: That's an
10 illustration there.

11 MR. McGARRAH: There are patented
12 products that will get you energy savings if
13 you run into an IP or intellectual property
14 issue around some of the things that we're
15 talking about.

16 MR. BROOKMAN: Andrew.

17 MR. deLASKI: Going back to this
18 patent issue, when DOE proposed standards for
19 refrigerators in the '90s, there was an
20 assumption at one point that the new
21 refrigerator would use vacuum panels, and DOE
22 tried to guess, you know, what are the panels

1 that they would use for complying with various
2 standards or made their best estimate, and
3 they admittedly have been wrong.

4 It's difficult because it's not
5 until these guys go to work figuring out how
6 to do this as cheaply as they can to meet the
7 needs of these guys that you're likely to know
8 the answer to the question of how you're going
9 to get there.

10 Because there's one patent on one
11 particular way doesn't mean there aren't other
12 ways to get there.

13 MR. BROOKMAN: Right.

14 MR. deLASKI: That patent may be
15 perhaps a cheap way to get there, but it
16 doesn't mean someone else can't find another
17 way to get there, and there are probably
18 multiple paths that haven't even been
19 conceived of today.

20 And I think that is proven true on
21 one standard after the other, that, you know,
22 we're not going to sit here today and figure

1 out how they're going to do it.

2 MR. BROOKMAN: Yeah, okay. Thank
3 you.

4 So the question that I'd like to
5 push to the fore here is the one you see at
6 the top of the screen, impact on small
7 businesses, how small business manufacturers
8 will be affected due to the new energy
9 conservation standards as proposed, as
10 proposed.

11 Yes, please, and use the
12 microphone. Please say your name for the
13 record.

14 MR. DOOM: Troy Doom, Dixie-
15 Narco/Crane.

16 Just one comment of what we've
17 been talking about so far for Class A has been
18 relative to glass front. Class B, the study
19 so far has been relative to stack, although it
20 does capture other ones.

21 But the impact relative to the
22 combination of vending or the snack portions,

1 there is a whole area in the proposal[page]
2 26024 that says it should include those, but
3 the manufacturing base in the detailed
4 analysis of the study hasn't really included
5 the impact into that whole arena because snack
6 machines are a different category. So that
7 is, I think, an open issue that will need to
8 be studied further.

9 MR. BROOKMAN: Okay. Thank you.

10 I'm not sure I got that. Did you
11 get that?

12 Would you repeat the last part of
13 that statement? Because I didn't follow it
14 for some --

15 MR. DOOM: Yeah.

16 MR. BROOKMAN: Use the microphone,
17 please.

18 MR. DOOM: Yeah, I guess it's on
19 page is it 26024? It shows basically a
20 comment about combination vending, which
21 essentially is a snack machine that has cooled
22 the lower portion. So that type of system

1 hasn't been fully analyzed as the glass front
2 and stack has and is not heavily purchased by
3 Coke and Pepsi. It's a whole other set of
4 manufacturers.

5 But it's saying that that is going
6 to be rolled into this proposal. So that's
7 really an open issue as far as industry impact
8 and that whole industry base that would need
9 to be further analyzed.

10 MR. BROOKMAN: Thank you. I
11 appreciate that. Okay. Thank you.

12 Yes, please. Use the microphone.

13 MR. CHASSEROT: Marc Chasserot
14 from shecco.

15 I just have a basic question. If
16 you're going to have these higher standards
17 that are going to force manufacturers to
18 improve their systems with more costly systems
19 and they're now saying they don't really have
20 the money for that, and yet at the same time
21 they're not the ones that are going to reap
22 the benefits from more efficient systems

1 because they're not the ones paying energy
2 bills, what is the Department of Energy going
3 to do in terms of incentivizing this so that
4 they have an incentive to actually introduce
5 these new products?

6 MR. BROOKMAN: I don't know
7 whether the Department wishes to.

8 MS. PINTO: Well, I mean, Francine
9 Pinto. Our authority is limited to
10 promulgating the standards.

11 MR. BROOKMAN: DOE would not take
12 the lead role in creating incentives.

13 MS. TARLEY: So you have the stick
14 without the carrot.

15 MS. PINTO: We don't have that
16 authority.

17 MR. BROOKMAN: Yeah. Okay. Thank
18 you. That was a clear answer.

19 So then do we get other comments
20 on how small business manufacturers will be
21 affected due to industry conservation
22 standards?

1 Yes, Marc, go ahead.

2 MR. CHASSEROT: Can I ask again?

3 Who would be the appropriate authority then

4 for that?

5 MS. TARLEY: Utility companies.

6 MS. HORNQUIST: Utility companies.

7 MS. TARLEY: States.

8 MR. HORNQUIST: Congress.

9 MS. TARLEY: Congress.

10 MR. BROOKMAN: Yes. I don't think

11 anybody has got additional to say on impact.

12 So shall we then return to the slides? Yeah?

13 Aris wishes to address the

14 combination machines issue.

15 MS. PINTO: Oh, and I want to

16 answer. This is Francine Pinto again.

17 But we do care about the impact.

18 That's why we have these meetings. We put out

19 the analysis. The decision makers -- we're

20 the staff, but the decision makers have to

21 weigh benefits and burdens. We present them

22 with all sides of the issue so that they can

1 make an informed decision, and that's why the
2 process does take time and why we have all of
3 these analyses, and we try to get as much of
4 your input as possible.

5 So I don't want to make it sound
6 like we don't care about it because we
7 obviously do, but also have our authority that
8 we've been given by Congress.

9 MR. BROOKMAN: Aris, do you want
10 to address the combination units?

11 MR. MARANTAN: Yeah, regarding
12 combination machines, I believe what we have
13 in the notice identifies the combination
14 machines as covered in this rulemaking because
15 of the basis definition that was provided in
16 the legislation.

17 So if the vending machine has a
18 component that vends bottles or canned
19 beverages, it's considered refrigerated,
20 bottled or canned beverages; it's considered a
21 vending machine covered in this rulemaking.

22 And so combination machines, DOE

1 feels that that's covered. To address the
2 idea that it has both snacks and beverages,
3 the idea is that the standards equations takes
4 care of that because only a portion of that
5 vending machine, a smaller portion of that
6 vending machine is refrigerated by the
7 refrigeration system, not the entire inside of
8 the case.

9 MR. BROOKMAN: Questions on that?

10 Any follow-on?

11 MR. MARANTAN: I welcome any
12 feedback on that.

13 MR. BROOKMAN: Go ahead, Steve.

14 MR. COUSINS: Steve Cousins.

15 It's not really an issue for Coke
16 since we don't purchase these kind of
17 machines, but if you have a very small
18 refrigerated capacity because the packages
19 that you're vending in that snack machine is
20 pretty small, the limitations with what's
21 used, what's available by way of refrigeration
22 component, I know it may have to be studied,

1 but it may be a situation where the
2 efficiencies are going to be -- you're going
3 to be less efficient just because of the
4 availability of the refrigeration component.

5 I don't know if that's true or not, but I
6 would imagine that would be a factor that
7 would enter into this.

8 MR. BROOKMAN: That configuration
9 may diminish the inherent efficiency.

10 MR. COUSINS: You have to end up
11 using a larger refrigeration system because
12 the small one is not commercially available
13 for the true load that's there.

14 I don't know if that's the case or
15 not. Maybe these guys will have a better feel
16 for it, but that would have an impact I would
17 guess.

18 MR. BROOKMAN: Please say your
19 name again.

20 MR. DOOM: Yeah, Troy Doom, Dixie-
21 Narco/Crane.

22 Yeah, I mean, one, I guess with a

1 smaller refrigeration area than the total
2 kilowatts per day requirement is going to be,
3 you know, less than the other vending
4 machines, but I think my point more was that
5 whole arena, the snack machines, the supply
6 base, you have your, you know, AMS, USI.
7 These are not machines that Coke and Pepsi
8 purchase. There's a whole other area that
9 benched marked in review for industry impact
10 that hasn't been done. So I'm not prepared to
11 comment on it. I just want to say that the
12 Class A and B, you know, refer to glass front
13 and stack. Class B is supposed to capture
14 that other category, but I think all of the
15 analysis and impact isn't available.

16 MR. BROOKMAN: Are there a lot of
17 them out there, those combination units?

18 MR. DOOM: I don't know, Sriram,
19 if you'd be able to comment on that. I'm not
20 sure of the percentage of the total base.

21 MS. TARLEY: This is Trent from
22 Dixie-Narco.

1 I don't know. It's very small.

2 So I need to understand what the number is. I
3 don't. We can get that. It's small, to
4 understand the impact, because we have not
5 done anything on this combination.

6 MR. BROOKMAN: Aris, do you want
7 to say anything more on that before we move
8 on?

9 MR. MARANTAN: Just the fact that
10 it has been very hard to get any data on those
11 combinations. We understand the shipments to
12 be small as well.

13 MR. BROOKMAN: Okay.

14 MR. SOMASUNDARAM: Okay. Sriram
15 Somasundaram, Pacific Northwest National Lab.

16 I'm here to wrap up the slide
17 presentations pretty much. There are three or
18 four more steps of impact analyses that we do
19 at this stage of the rulemaking primarily to
20 assess the impact of setting these standards
21 on the electric grid in this case because it
22 is electricity consuming equipment.

1 So we investigate the effects on
2 utilities from reduced energy consumption of
3 these higher efficient equipment, and we do
4 this using the NEMS-BT model, the national
5 energy modeling system, tailored for DOE's
6 building technologies program, and it is
7 published or it's maintained by EIA, which is
8 another arm of DOE.

9 The output of this analysis is
10 changes in electricity sales and prices by
11 region of the country, and changes to the mix
12 of electricity generation in the country and
13 changes in installed capacity and generation
14 of electricity.

15 And those are also reported as
16 part of the rulemaking in the different
17 chapters of the TSD.

18 And this particular utility impact
19 analysis is in Chapter 14.

20 The next step is to do the
21 employment impact analysis. There is a direct
22 and indirect impact on employment. Direct

1 impact on employment is captured in the
2 manufacturer impact analysis that NCI reported
3 earlier.

4 The indirect impact is captured
5 using a model called ImSET or impact of sector
6 energy technologies that was developed by
7 Pacific Northwest National Laboratory, and
8 this particular model estimates the changes in
9 employment and the industry output and wage
10 income to this BVM industry.

11 And because of setting the
12 standards in the beverage vending machine
13 market to the overall United States economy
14 resulting from changes in expenditures in the
15 various sectors of the economy, so it does a
16 sector-by-sector assessment of economic
17 changes. It also estimates changes in cost
18 and benefits using from the national energy
19 savings analysis and together with the direct
20 employment impact's capture in the MIA,
21 reports the change in employment in the
22 national economy, overall national economy.

1 Other than in the manufacturing
2 sector being regulated, which is the beverage
3 vending machine industry, as a consequence of
4 these energy conservation standards.

5 And as you probably saw in the
6 results reported in the notice, the impact on
7 the indirect employment is very small because
8 of these standards.

9 And this is in Chapter 15 of the
10 TSD.

11 The next step is the environmental
12 assessment, where together with the utility
13 impact, as I talked about the impact on the
14 electricity sales and prices and generation
15 capacity, there is then an environmental
16 aspect associated with that, and that's what's
17 captured here. Again, using the NEMS output
18 model and NEMS-BT model.

19 We calculated a reduction in power
20 plant emissions of carbon dioxide, nitrogen
21 oxides and mercury. The sulfur dioxide
22 emissions are not included in this particular

1 study or impact analysis because of the
2 emissions cap set by the Clean Air Act
3 amendments of 1990. So SO₂ is considered
4 already capped, and emission changes in this
5 particular rulemaking was estimated as too
6 small to affect values of emissions, allowance
7 allowed under the CAP.

8 We also converted the amounts of
9 each of these emissions into a monetized value
10 using a dollar value per unit of emissions, so
11 CO₂, NO_x and those are all reported in Chapter
12 16 of the TSD.

13 Finally, we also are required to
14 conduct a regular impact analysis which
15 primarily investigates the national impacts
16 due to non-regulatory approaches and
17 alternatives to this regulatory process.

18 So the four different non-
19 regulatory options or alternatives we consider
20 in our qualitative analysis were either no new
21 regulatory action at all or some process of
22 commercial customer rebates to the purchasers

1 of this equipment, or commercial customer tax
2 credits, say, from the federal government, and
3 finally we looked at the approach of
4 alternative call voluntary energy efficiency
5 targets, such the ENERGY STAR program that
6 already exists for this particular product.

7 We conducted a qualitative
8 comparison of all these four non-regulatory
9 alternatives to the regulatory process and
10 came to the conclusion that this particular
11 market structure, the particular BVM market
12 structure did not allow for a successful
13 quantitative analysis of these alternatives on
14 whether more energy efficient equipment can be
15 used or sold in the market.

16 So we report the qualitative
17 analysis results in Chapter 17 of the TSD as
18 well as in the final section of the rule.

19 So that pretty much concludes the
20 NOPR analyses, and I think if there aren't any
21 questions, I might pause here to see if there
22 are any questions on these four steps.

1 MR. BROOKMAN: Yeah, I think
2 that's a good practice.

3 So you can see the final three or
4 four, four different elements of analysis that
5 are all considered and rolled into the
6 proposed standard. So comments, issues
7 related to these, if there be any? Okay.

8 MR. LLENZA: This is Charles
9 Llenza, Department of Energy.

10 My team in the Department here
11 would like to revisit a little bit of the
12 earlier discussion here, whether or not by de-
13 facto the industry is now meeting the proposed
14 standard levels. Can you just restate your
15 position once again in terms of our proposed
16 standard levels?

17 Could we hear one more time to
18 make sure we understand this?

19 MR. ROTH: Trent Roth from Dixie-
20 Narco.

21 Class A on your proposed levels
22 right now the ASHRAE testing, we currently

1 meet those levels. In Class B we do not.

2 MR. BROOKMAN: Okay. Glen.

3 MR. SELFRIDGE: For Class A we do
4 not currently meet those levels, but given no
5 intellectual property problem, we could meet
6 them fairly easily.

7 For the Type B machine we do not
8 meet them, but we could without tremendous
9 effort.

10 MR. BROOKMAN: Okay. That's good.

11 I just want to confirm. There's no other
12 manufacturer in the room, right? No. Okay.
13 I just wanted to.

14 MR. LLENZA: Okay, good.

15 MR. BROOKMAN: Thank you very much
16 for that, yes.

17 MR. SOMASUNDARAM: So finally,
18 this is the most important step, that we would
19 like comments, latest by July 28th if not
20 earlier, and this is the process by which you
21 can send us your written comments, either by
22 E-mail or --

1 MR. LLENZA: This is Charles
2 Llenza, Department of Energy again.

3 Sometimes we send a lot of things
4 to Brenda, but I think if we're sending
5 comments electronically, if you use the portal
6 there, the E-mail portal for beverage vending
7 rulemaking, it goes into a docket system and
8 it's the better place to use if we're going to
9 do electronic, and of course, you've got the
10 mail and the courier for the other one.

11 Also, my link is there in case you
12 want to, you know. If you have some further
13 questions or something, you could shoot me an
14 E-mail. I would be glad to help you out on
15 that.

16 MR. BROOKMAN: Steve.

17 MR. COUSINS: I have a question
18 with respect to the manufacturers. I just
19 heard you say that you think you can hit the
20 targets. My question is can you hit the
21 target for a self-styled solid front.

22 Do you know or you don't know?

1 MR. BROOKMAN: Glen?

2 MR. SELFRIDGE: Okay. I'll take
3 the first

4 MR. COUSINS: You don't even have
5 to answer the question. My concern is that,
6 you know, you quickly said you can hit the
7 target, but have you considered the definition
8 of an A and a B.

9 MR. BROOKMAN: A reconfigured
10 machine.

11 MR. COUSINS: Well, I'm saying it
12 may be machine configurations where you cannot
13 hit that target.

14 MR. SELFIDGE: Okay. That's
15 possible if you had a closed front.

16 MR. COUSINS: Right.

17 MR. SELFRIDGE: (Speaking from an
18 unmiked location.)

19 MR. COUSINS: Well, I'm suggesting
20 your refrigeration levels may be higher.

21 MR. SELFRIDGE: The refrigeration
22 actually is lower. (Speaking from an unmiked

1 location.)

2 MR. COUSINS: Well, if I want to
3 increase storage capacity in a solid front
4 shelf styled arrangement, in other words, I
5 want to put cans in a shelf style machine and
6 I want to pack out, maximize for that purpose,
7 on a solid front machine, can you hit the
8 target?

9 My guess is you can't hit that
10 target. You can't hit the TSL target. That's
11 my guess. I would be very surprised if you
12 said you could.

13 So the only thing I'm cautioning
14 you on is you quickly said, yes, we can hit
15 the targets. I would challenge that maybe you
16 cannot hit the targets or the configurations
17 that we would purchase.

18 MR. BROOKMAN: Trent.

19 MS. TARLEY: This Trent from
20 Dixie-Narco.

21 I mean, I would agree that it
22 would be a very big challenge. A lot of it

1 will come back to you because as you as a
2 purchaser understand. How do we start to look
3 at the requirements that, for instance, Coca-
4 Cola has for lighting, and knowing that we
5 have this, what are the things that we have to
6 change?

7 I think what you're saying on
8 Glen's comment, it's a Class A machine.
9 You're going to have when you add the lighting
10 in it, you're expecting light to decide the
11 same way you do on a B machine today.

12 MR. COUSINS: Yeah, I'm thinking
13 even with that light you may not hit the
14 target.

15 MR. SELFRIDGE: Well, this is Glen
16 again. I think you probably could. With that
17 particular machine, I would say probably we
18 could if we could dull the lighting, if you go
19 to refrigeration mode. The volume would be up
20 (speaking from an unmiked location). And
21 it's a variable capacity. But that just
22 brings me back to my original -- one of my

1 original concerns, was that the methodology
2 that uses the ASHRAE energy management system
3 is it takes the lights out of the equation, is
4 not allowing for any other technology.

5 If you take the lights out at
6 three and a half kilowatt hours right now,
7 today, on a medium size Class A, in terms of
8 refrigerating that thing, there's not much
9 space left to go.

10 MR. COUSINS: Well, yeah, that's
11 right. There's not much space.

12 MR. SELFRIDGE: And there are not
13 many options.

14 MR. COUSINS: What I'm concerned
15 about is if Coke says, "We want to have a U
16 Vend shelf style machine," you know, I
17 wouldn't want for the world to come back and
18 say, "Well, legally we can't build that for
19 you, and by the way, technology is not good
20 enough to allow you to do that."

21 MR. SELFRIDGE: Well, that's
22 exactly where I was headed with my overall

1 objection. Until we decide we could meet this
2 on a regular Type A machine by doing that, but
3 the other side of that coin is you're limiting
4 technology into you're clearing a lot of them
5 with that level because --

6 MR. COUSINS: And I want to look
7 at the numbers again. I'm not convinced that
8 -- yeah, maybe the majority of the machines
9 that we guy in the store in the past will be
10 okay with these TSLs, but, hey, I think I
11 would want to take advantage of what time I
12 have now between now and the 28th of July to
13 see if we can make it.

14 MR. BROOKMAN: So additional
15 questions and comments about these
16 presentation materials, this last bunch. Some
17 of it is fairly complicated. You saw also the
18 questions that the Department wanted you to
19 respond to specifically. Any additional
20 thoughts on those before we turn to the final
21 phase of the meeting today?

22 Yes, Nina.

1 MS. TARLEY: Nina Tarley, Pepsi
2 Co.

3 My comment is on the discussion.
4 Pepsi Co.'s approach is that we would like to
5 save as much energy as possible in the most
6 cost efficient way. So if my choice is, for
7 example, an option that costs nothing and
8 allows us to save even small percentage of
9 energy and potentially to promote cheap even
10 larger, that's definitely our first choice.

11 As you know, there are a lot of
12 energy management devices available now in the
13 market. They all cost a lot of money, and
14 they're not allowed to be used during the
15 energy testing. So that always becomes not
16 the first choice because you're looking at
17 extra cost with some maybe guaranteed ban if
18 you took energy saving. But we're not allowed
19 to use it during the testing protocol. So
20 that's how we group, you know.

21 The objective is save the most
22 energy and the most cost efficient way.

1 MR. BROOKMAN: Okay. thank you.

2 Thanks for clarifying that and that
3 illustration as well.

4 Any additional comments at this
5 point?

6 (No response.)

7 MR. BROOKMAN: So now there's one
8 more opportunity to thank. Now there's an
9 opportunity for anybody to make closing
10 remarks to summary remarks, issues that you
11 wish to bring to the floor that you haven't
12 covered already?

13 (No response.)

14 MR. BROOKMAN: No closing remarks.

15 Okay. So then for my part I'm going to turn
16 it back to Charles Llenza, who is the senior
17 federal official, and I would just thank all
18 of you for what was a very productive
19 workshop. I appreciate the candor and the
20 sense of exchange, what happened here.

21 The final page in your packet it
22 an evaluation form. Please take one minute to

1 fill it out. The Department reads them
2 carefully. They're always looking for a way
3 to do these meetings better.

4 So thanks to all of you.

5 MR. LLENZA: I just want to say
6 thank you for attending the meeting, we are
7 eager to receive your comments in written
8 form, and once again I just want to emphasize
9 these are the methods to getting your comments
10 back to us as soon as possible.

11 And thanks for attending the
12 meeting. That's all I have.

13 MR. BROOKMAN: Thank you.

14 (Whereupon, at 2:18 p.m., the
15 public meeting was concluded.)
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